

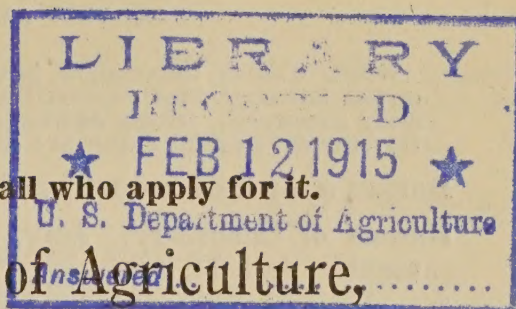
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United States Department of Agriculture, .....



WASHINGTON, D. C., *January 30, 1915.*

## MONTHLY LIST OF PUBLICATIONS.

[JANUARY, 1915.]

No publications are sold by the Department of Agriculture; therefore do not send money to this office.

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### COUPON SYSTEM REESTABLISHED.

For the convenience of the general public, coupons that are good until used in *exchange* for Government publications *sold* by the Superintendent of Documents may be purchased from his office in sets of 20 for \$1.

### REPORTS.

Description of Some Weevils Reared from Cotton in Peru. By W. Dwight Pierce, Entomological Assistant, Bureau of Entomology. Pp. 16, pls. 2, figs. 6. Contribution from the Bureau of Entomology. Jan. 25, 1915. (Report No. 102, Office of the Secretary.) Price, 5 cents.

### SERIALS.

*Journal of Agricultural Research*. Vol. 3. No. 4. January, 1915. Contents: Observations on the Life History of *Agrilus bilineatus*. By Royal N. Chapman.—Effect of Dilution upon the Infectivity of the Virus of the Mosaic Disease of Tobacco. By H. A. Allard.—Moldiness in Butter. By Charles Thom and R. H. Shaw.—Susceptibility of Citrous Fruits to the Attack of the Mediterranean Fruit Fly. By E. A. Back and C. E. Pemberton.—Physiological Changes in Sweet Potatoes during Storage. By Heinrich Hasselbring and Lon A. Hawkins.—Three-Cornered Alfalfa Hopper. By V. L. Wildermuth. Pp. 283–362, pls. xxxviii–xliii, figs. 2. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

## SERVICE AND REGULATORY ANNOUNCEMENTS.

NOTE.—Contain information, instructions, and notices of a regulatory nature. Issued monthly by certain bureaus. Free distribution limited to individuals, firms, establishments, and journals especially concerned. Others desiring copies may obtain them from the Superintendent of Documents, Government Printing Office, at 5 cents each.

- Bureau of Animal Industry. December, 1914. Pp. 157-187. No. 92. Jan. 26, 1915.  
 Bureau of Chemistry. July, 1914. Supplement. Pp. 531-629. No. 7. Supplement. Jan. 11, 1915.  
 Bureau of Chemistry. August, 1914. Supplement. Pp. 637-686. No. 8. Supplement. Jan. 14, 1915.  
 Bureau of Chemistry. December, 1914. Pp. 753-755. No. 12. Jan. 25, 1915.  
 Federal Horticultural Board. December, 1914. Pp. 87-90. No. 11. Jan. 22, 1915.  
 Office of Markets. Pp. 1-11. No. 1. Jan. 19, 1915.

## SOIL SURVEYS.

- Soil Survey of Washington County, Texas. By A. H. Meyer, E. C. Eekmann, L. Cantrell, and L. V. Davis. Pp. 31, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

## BULLETINS.

- Correlating Agriculture with the Public School Subjects in the Southern States. By C. H. Lane, Chief Specialist in Agricultural Education, and E. A. Miller, Assistant in Agricultural Education. Pp. 41, figs. 9. Contribution from the Office of Experiment Stations. Jan. 21, 1915. (Department Bulletin 132.) Price, 10 cents.

This bulletin is prepared especially for the use of rural school teachers in the Southern States.

- The Effect of the Cattle Tick Upon the Milk Production of Dairy Cows. By T. E. Woodward, W. F. Turner, Dairy Division, and Cooper Curtice, Zoological Division. Pp. 22, figs. 6. Contribution from the Bureau of Animal Industry. Jan. 16, 1915. (Department Bulletin 147.) Price, 5 cents.

Cows carrying ticks did not hold up so well in milk flow as the cows kept free from ticks and did not increase their flow of milk when the feed was increased, as did the tick-free cows.

- Utilization of the Fish Waste of the Pacific Coast for the Manufacture of Fertilizer. By J. W. Turrentine, Scientist in Soil Laboratory Investigations. Pp. 71, pls. 6. Contribution from the Bureau of Soils. Jan. 23, 1915. (Department Bulletin 150.) Price, 15 cents.

This bulletin discusses the utilization of fish waste in the salmon-canning and similar industries on the Pacific Coast as a source of fertilizer material.

- Forest Planting in the Eastern United States. By C. R. Tillotson, Forest Examiner. Pp. 38, pls. 7. Contribution from the Forest Service. Jan. 28, 1915. (Department Bulletin 153.) Price, 10 cents.

This bulletin is suited to conditions in Iowa, Illinois, Indiana, Michigan, Ohio, Pennsylvania, New Jersey, New York, and all the New England States.

- The Life History of the Lodgepole Pine in the Rocky Mountains. By D. T. Mason, Assistant District Forester, District 1. Pp. 35, pls. 5, fig. 1. Contribution from the Forest Service. Jan. 14, 1915. (Department Bulletin 154.) Price, 10 cents.

The lodgepole region, commercially speaking, is very restricted, being lumbered extensively only in Montana, Wyoming, Colorado, and northeast Utah, although its botanical range extends from the Yukon Territory, south through the Cascade, Sierra Nevada, and San Jacinto Mountains to Lower California, and through the main range of the Rocky Mountains to New Mexico.

- Wireworms Attacking Cereal and Forage Crops. By J. A. Hyslop, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 34, figs. 8. Contribution from the Bureau of Entomology. (Professional Paper.) Jan. 27, 1915. (Department Bulletin 156.) Price, 5 cents.

Describes a number of species of wireworms and suggests remedies for their control.

**Tillage and Rotation Experiments at Nephi, Utah.** By P. V. Cardon, Scientific Assistant, Office of Cereal Investigations. Pp. 45, figs. 21. Contribution from the Bureau of Plant Industry. Jan. 21, 1915. (Department Bulletin 157.) Price, 5 cents.

This bulletin should be of interest to agronomists and to dry-land farmers, particularly in the Great Basin area.

**Soils of the Sassafras Series.** By J. A. Bonsteel, Scientist in Soil Survey. Pp. 52, pls. 9, fig. 1. Contribution from the Bureau of Soils. Jan. 14, 1915. (Department Bulletin 159.) Price, 15 cents.

The Atlantic Coastal Plain from the southern end of the Chesapeake Bay to the western end of Long Island contains the soils of this series, and it is to farmers within this region living on the low-lying terraces which border the chief tidewater estuaries and the ocean that this bulletin is of special interest.

**Cactus Solution as an Adhesive in Arsenical Sprays for Insects.** By M. M. High, Entomological Assistant, Truck Crop and Stored Product Insect Investigations. Pp. 20. Contribution from the Bureau of Entomology. (Professional Paper.) Jan. 22, 1915. (Department Bulletin 160.) Price, 5 cents.

This bulletin describes the use of cactus solution as an adhesive in the application of arsenical sprays against the belted cucumber beetle. It is applicable to regions where prickly pear is easily obtainable for the treatment of insects of related habits, such as the striped and twelve-spotted cucumber beetles, etc.

**Horticultural Experiments at the San Antonio Field Station, Southern Texas.** By Stephen H. Hastings, Farm Superintendent, and R. E. Blair, Scientific Assistant, Office of Western Irrigation Agriculture. Pp. 26, figs. 8. Contribution from the Bureau of Plant Industry. Jan. 13, 1915. (Department Bulletin 162.) Price, 5 cents.

This bulletin indicates the selections and cultural methods best adapted to successful fruit growing in the vicinity of San Antonio and is of interest to the inhabitants of that region.

**A Field Test for Lime-Sulphur Dipping Baths.** By Robert M. Chapin, Senior Biochemist, Biochemic Division. Pp. 7, fig. 1. Contribution from the Bureau of Animal Industry. Jan. 12, 1915. (Department Bulletin 163.) Price, 5 cents.

This bulletin describes a portable testing outfit for estimating the strength of lime-sulphur dipping baths; it is of interest to makers and users of such baths, as well as to officials charged with the enforcement of dipping regulations.

**Field Test With a Toxic Soil Constituent: Vanillin.** By J. J. Skinner, Scientist in Soil Fertility Investigations. Pp. 9, pls. 4. Contribution from the Bureau of Soils. (Professional Paper.) Jan. 30, 1915. (Department Bulletin 164.) Price, 5 cents.

The effect upon plant growth of vanillin, a toxic soil constituent, as demonstrated in pot experiments and field tests, is described in this bulletin.

**Ophthalmic Mallein for the Diagnosis of Glanders.** By John R. Mohler, Assistant Chief of Bureau, and Adolph Eichhorn, Senior Bacteriologist, Pathological Division. Pp. 11, pl. 1. Contribution from the Bureau of Animal Industry. (Professional Paper.) Jan. 22, 1915. (Department Bulletin 166.) Price, 5 cents.

This bulletin points out the advantageous and satisfactory use of the ophthalmic mallein test in the diagnosis of glanders and the necessity for prompt action on reactors to this test in eradicating this disease. Of interest to veterinarians and State live-stock sanitary authorities.

**Contributions Toward a Monograph of the Scolytid Beetles. II. Preliminary Classification of the Superfamily Scolytoidea.** By A. D. Hopkins, In Charge of Forest Insect Investigations. Pp. iv+165-232, pls. 8, figs. 17. Jan. 9, 1915. (Technical Series 17, Part 2, Bureau of Entomology.) Price, 20 cents.

**Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction during the period from October 1 to December 31, 1912.** Pp. 60, pls. 5. Jan. 23, 1915. (Bureau of Plant Industry, Inventory No. 33. Nos. 34340 to 34727.) Price, 15 cents.

**Contents and Index to Bulletin 116, Bureau of Entomology.** Pp. vii+111-117. Jan. 18, 1915. Price, 5 cents.

**Federal Legislation, Regulations, and Rulings Affecting Agricultural Colleges and Experiment Stations.** (Revised to Dec. 21, 1914.) Pp. 31. Jan. 15, 1915. (Office of Experiment Stations.)

## FARMERS' BULLETINS.

**Breeds of Beef Cattle.** By W. F. Ward, Senior Animal Husbandman in Beef Cattle Investigations, Animal Husbandry Division. Pp. 23, figs. 18. Contribution from the Bureau of Animal Industry. Jan. 21, 1915. (Farmers' Bulletin 612.)

The distinguishing characteristics of the several breeds of beef and of dual-purpose cattle are presented in this bulletin. The information is of interest to cattle raisers desirous of securing the breed best suited to a particular locality or to certain conditions.

**Ice Houses and the Use of Ice on the Dairy Farm.** By John T. Bowen, Technologist, and Guy M. Lambert, Dairyman, Dairy Division. Pp. 24, figs. 11. Contribution from the Bureau of Animal Industry. Jan. 16, 1915. (Farmers' Bulletin 623.)

The use of ice on the dairy farm for the keeping of milk and cream in the best marketable condition is discussed in this bulletin. Plans and specifications for ice houses are given. The bulletin is applicable to dairy sections where natural ice is obtainable.

**Growing Peaches: Sites, Propagation, Planting, Tillage, and Maintenance of Soil Fertility.** By H. P. Gould, Pomologist in Charge of Fruit-Production Investigations, Office of Horticultural and Pomological Investigations. Pp. 24, figs. 7. Contributions from the Bureau of Plant Industry. Jan. 23, 1915. (Farmers' Bulletin 631.)

This bulletin is intended for general distribution. Farmers' Bulletins Nos. 632 and 633 continue the general subject of peach growing and treat of other fundamental orchard operations.

**Growing Peaches: Pruning, Renewal of Tops, Thinning, Interplanted Crops, and Special Practices.** By H. P. Gould, Pomologist in Charge of Fruit-Production Investigations. Pp. 23, figs. 19. Contribution from the Bureau of Plant Industry. Jan. 15, 1915. (Farmers' Bulletin 632.)

This bulletin is intended for general distribution.

**The Grasshopper Problem and Alfalfa Culture.** By F. M. Webster, In Charge of Cereal and Forage Insect Investigations. Pp. 10, figs. 8. Contribution from the Bureau of Entomology. Jan. 25, 1915. (Farmers' Bulletin 637.)

This bulletin describes the species of grasshoppers that work special injury to the alfalfa fields and suggests methods for their destruction. It will be of interest wherever alfalfa is threatened by an attack from these insects.

**Laboratory Exercises in Farm Mechanics for Agricultural High Schools.** By Daniels Scoates, Professor of Agricultural Engineering, Mississippi Agricultural and Mechanical College. Pp. 26, figs. 26. Contribution from the Office of Experiment Stations. Jan. 23, 1915. (Farmers' Bulletin 638.)

This bulletin is intended primarily for the use of teachers of high-school agriculture.

**Blackberry Culture.** By George M. Darrow, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 13, figs. 8. Contribution from the Bureau of Plant Industry. Jan. 29, 1915. (Farmers' Bulletin 643.)

This bulletin is of interest to blackberry growers all over the United States.

## PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**National Weather and Crop Bulletin,** January, 1915, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Tuesday, April to October; monthly remainder of year.) Price, 25 cents a year.

**Snow and Ice Bulletins** for January 5, 12, 19, 26. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,  
*Editor and Chief Division of Publications.*

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# United States Department of Agriculture,

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WASHINGTON, D. C., February 27, 1915.

## MONTHLY LIST OF PUBLICATIONS.

[FEBRUARY, 1915.]

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### REPORTS.

Annual Reports of the Department of Agriculture for the year ended June 30, 1914.

Report of the Secretary, with Reports of Heads of the several branches of the department. Pp. 359. Price, 40 cents. No copies available for distribution through the Department.

Annual Report of the Guam Agricultural Experiment Station, for 1914. Pp. 27, pls. 5, figs. 6. Feb. 26, 1915. Price, 10 cents.

Annual Report of the Hawaii Agricultural Experiment Station for 1914. Pp. 73, pls. 3. Feb. 20, 1915. Price, 10 cents.

### SERIALS.

*Journal of Agricultural Research*. Vol. 3, No. 5. February, 1915. Contents: Life History of the Mediterranean Fruit Fly from the Standpoint of Parasite Introduction. By E. A. Back and C. E. Pemberton.—Relation of Simultaneous Ovulation to the Production of Double-Yolked Eggs. By Maynie R. Curtis.—Brachysm, a Hereditary Deformity of Cotton and Other Plants. By O. F. Cook.—Ability of Colon Bacilli to Survive Pasteurization. By S. Henry Ayers and W. T. Johnson, jr.—Fitting Logarithmic Curves by the Method of Moments. By John Rice Miner.—Organic Phosphoric Acid of Rice. By Alice R. Thompson.—Two Clover Aphids. By Edith M. Patch. Pp. 363–433, pls. xlv–lxii, figs. 3. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

Experiment Station Record, Vol. XXXII, No. 1, January, 1915. E. W. Allen, Ph. D., Editor. Pp. 1–100. Price, 15 cents.

Same, Vol. XXXII, No. 2, February, 1915. Pp. 101–200. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

## SERVICE AND REGULATORY ANNOUNCEMENTS.

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Bureau of Animal Industry. January, 1915. Pp. 1-20. No. 93. Feb. 18, 1915.

Bureau of Chemistry. September, 1914, Supplement. Pp. 691-738. No. 9, Supplement. Feb. 14, 1915.

Insecticide and Fungicide Board. October, November, and December, 1914. Pp. 93-108. No. 7. Feb. 10, 1915.

Federal Horticultural Board. January, 1915. Pp. 1-6. No. 12. Feb. 20, 1915.

Office of Markets. Pp. 13-15. No. 2. Feb. 13, 1915.

## SOIL SURVEYS.

Soil Survey of Goodhue County, Minnesota. By William G. Smith, H. L. Westover, B. D. Gilbert, and N. M. Kirk. Pp. 34, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Orangeburg County, South Carolina. By J. H. Agee, E. C. Hall, R. B. Hardison, J. O. Veatch, and L. Cantrell. Pp. 39, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Boone County, West Virginia. By W. J. Latimer. Pp. 26, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

## BULLETINS.

Highway Bonds: A Compilation of Data and an Analysis of Economic Features Affecting Construction and Maintenance of Highways Financed by Bond Issues, and the Theory of Highway Bond Calculations. By Laurence I. Hewes, Chief, Economics and Maintenance, and James W. Glover, Professor of Mathematics and Insurance, University of Michigan, Collaborator, Office of Public Roads. Pp. 136, pls. 9. Contribution from the Office of Public Roads. Feb. 12, 1915. (Department Bulletin 136.) Price, 25 cents.

The department has no copies of this bulletin in stock. It can be secured through the Office of the Superintendent of Documents only. Send all remittances to that official direct and not to this Office.

The Eastern Hemlock. By E. H. Frothingham, Forest Examiner. Pp. 43, pls. 5. Contribution from the Forest Service. Feb. 3, 1915. (Department Bulletin 152.) Price, 10 cents.

This bulletin describes the more important characteristics of hemlock, presents tables of its volume and rate of growth, and gives the chief facts regarding its utilization.

Para-Dichlorobenzene as an Insect Fumigant. By A. B. Duckett, Scientific Assistant, Truck Crop and Stored Product Insect Investigations. Pp. 7, pls. 2. Contribution from the Bureau of Entomology. (Professional Paper.) Feb. 10, 1915. (Department Bulletin 167.) Price, 5 cents.

Gives directions for the use of para-dichlorobenzene both as an insecticide and as a fumigant.

Injury by Disinfectants to Seeds and Roots in Sandy Soils. By Carl Hartley, Pathologist, Investigations in Forest Pathology. Pp. 35, pls. 1, figs. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) Feb. 20, 1915. (Department Bulletin 169.) Price, 5 cents.

Preliminary tests of disinfectants in controlling damping-off in various nursery soils.

The European Pine-Shoot Moth; A Serious Menace to Pine Timber in America. By August Busck, Entomological Assistant, Forest Insect Investigations. Pp. 11, pls. 6. Contribution from the Bureau of Entomology. Feb. 9, 1915. (Department Bulletin 170.) Price, 5 cents.

Gives the life history, habits, and methods of control of this insect, which is a menace to pine trees.

Food of the Robins and Bluebirds of the United States. By F. E. L. Beal, Assistant Biologist. Pp. 31, figs. 2. Contribution from the Bureau of Biological Survey. (Professional Paper.) Feb. 5, 1915. (Department Bulletin 171.) Price, 5 cents.

This bulletin discusses the value of robins and bluebirds as insect destroyers and shows how the small damage done by the former may be reduced by supplying wild fruits to meet their requirements. It is for general distribution.

**The Production and Consumption of Dairy Products.** By Eugene Merritt. Pp. 19. Contribution from the Bureau of Crop Estimates. Feb. 15, 1915. (Department Bulletin 177.) Price, 5 cents.

This bulletin outlines the changes in the geographic distribution of the dairy industry and gives information concerning the consumption of dairy products on farms and in cities. It is of special interest to those engaged in any phase of dairying or in the distribution of dairy products.

**Agricultural Alcohol: Studies of Its Manufacture in Germany.** By Edward Kremers, Special Agent, Plant Physiological and Fermentation Investigations. Pp. 35. Contribution from the Bureau of Plant Industry. (Professional Paper.) Feb. 2, 1915. (Department Bulletin 182.) Price, 5 cents.

This report brings out the fact that the success of agricultural alcohol in Germany is the result of long-continued experimentation, backed by a determination on the part of those high in authority that the project should succeed.

**A Method of Fumigating Seed.** By E. R. Sasscer, Chief Inspector, Federal Horticultural Board, and Lon A. Hawkins, Plant Physiologist, Plant Physiological and Fermentation Investigations. Pp. 6, figs. 2. Contribution from the Bureau of Entomology and Bureau of Plant Industry. Feb. 27, 1915. (Department Bulletin 186.) Price, 5 cents.

Fumigation by the method described in this bulletin was found to kill insects without injury to the seed and with a considerably shorter exposure than is necessary in the usual method of seed fumigation.

**Preliminary Census of Birds of the United States.** By Wells W. Cooke, Assistant Biologist. Pp. 11, fig. 1. Contribution from the Bureau of Biological Survey. Feb. 11, 1915. (Department Bulletin 187.) Price, 5 cents.

This bulletin is a preliminary report on the number and relative abundance of wild birds. It is for the information of those interested in the protection and increase of birds.

**Insects Injurious to Forests and Forest Products. II. Biology of the Termites of the Eastern United States, with Preventive and Remedial Measures.** By Thomas E. Snyder, Entomological Assistant, Forest Insect Investigations. Pp. v+13-85, pls. III-XVII. figs. 11. Feb. 17, 1915. (Bulletin 94, Part 2, Bureau of Entomology.) Price, 20 cents.

Describes injuries done to telegraph and telephone poles and bridge timbers by the "white ant", and suggests methods of prevention.

**Contents and Index to Bulletin 115, Bureau of Entomology.** Pp. xi+183-186. Feb. 5, 1915. Price, 5 cents.

**Contents and Index to Technical Series No. 27, Bureau of Entomology.** Pp. xi+111-114. Feb. 13, 1915. Price, 5 cents.

**Grasses and Forage Plants of Hawaii.** By C. K. McClelland, Agronomist. Pp. 43, pls. 9. Feb. 20, 1915. (Bulletin 36, Hawaii Agricultural Experiment Station.) Price, 15 cents.

**Ammonification and Nitrification in Hawaiian Soils.** By W. P. Kelley, Chemist. Pp. 52. Feb. 25, 1915. (Bulletin 37, Hawaii Agricultural Experiment Station.) Price, 10 cents.

**Fungus Diseases of Coffee in Porto Rico.** By G. L. Fawcett, Plant Pathologist. Pp. 29, pls. 8. Feb. 9, 1915. (Bulletin 17, Porto Rico Agricultural Experiment Station.) Price, 10 cents.

**Rules and Regulations of the Secretary of Agriculture under the United States Cotton Futures Act of August 18, 1914.** Pp. 24. Feb. 11, 1915. (Circular 46, Office of the Secretary.) Price, 5 cents.

**How To Kill and Bleed Market Poultry.** By M. E. Pennington, Chief Food Research Laboratory, and H. M. P. Betts. Pp. 12, figs. 6. Revised edition, Feb. 4, 1915. (Circular 61, Revised, Bureau of Chemistry.) Price, 5 cents.

#### SEPARATES.

**The Organization of a Rural Community.** By T. N. Carver, Adviser in Agricultural Economics, Office of Markets and Rural Organization. Pp. 58, figs. 2. (Separate 632, Yearbook 1914.) Price, 5 cents.

#### FARMERS' BULLETINS.

**Some Common Birds Useful to the Farmer.** By F. E. L. Beal, Assistant Biologist. Pp. 27, figs. 23. Contribution from the Bureau of Biological Survey. Feb. 13, 1915. (Farmers' Bulletin 630.)

The habitat, food habits, and economic relation to agriculture of more than 50 birds common to farming sections are discussed in this bulletin. It supersedes Farmers' Bulletin 54.

**Tomato Growing in the South.** By H. C. Thompson, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 13, figs. 9. Contribution from the Bureau of Plant Industry. Feb. 8, 1915. (Farmers' Bulletin 642.)

Of especial interest to truck growers and members of canning clubs in the South.

**Crimson Clover: Seed Production.** By J. M. Westgate, Agronomist in Charge of Clover Investigations, Office of Forage-Crop Investigations. Pp. 13, figs. 13. Contribution from the Bureau of Plant Industry. Feb. 19, 1915. (Farmers' Bulletin 646.)

This bulletin is adapted primarily to the crimson-clover section, viz, the eastern portion of the United States south of Pennsylvania.

**Alfalfa Attacked by the Clover-Root Curculio.** By F. M. Webster, In Charge of Cereal and Forage Insect Investigations. Pp. 8, figs. 6. Contribution from the Bureau of Entomology. Feb. 27, 1915. (Farmers' Bulletin 649.)

In this bulletin attention is directed to the serious injury to clover and alfalfa caused by the clover-root curculio, and a description of the insect, its feeding habits, and remedial and preventive measures are given.

**The Agricultural Outlook.** Contribution from the Bureau of Crop Estimates. Feb. 6, 1915. Pp. 29. (Farmers' Bulletin 651.)

Contents: Live stock on farms, January 1, 1915.—Live-stock values per head.—Yearly marketings of live stock.—Effect of war upon exports of horses.—Foot-and-mouth disease.—Stock of potatoes, January 1, 1915.—Fall seedings in cotton States.—Crop-value comparisons.—Trend of prices of farm products.—Apple cold-storage holdings and the market.—Production of upland long-staple cotton.—Estimated number on farms and value of domestic animals (tables).—Prices of farm products (tables).—International Institute crop report.

#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**National Weather and Crop Bulletin, No. 2, February, 1915,** reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Tuesday, April to October; monthly remainder of year.) Price, 25 cents a year.

**Snow and Ice Bulletins for February 2, 9, 16, 23.** These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,  
*Editor and Chief Division of Publications.*

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# United States Department of Agriculture,

WASHINGTON, D. C., *March 31, 1915.*

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### REPORTS.

Classification of the Cryphalinae, with Descriptions of New Genera and Species. By A. D. Hopkins, Ph. D., In Charge of Forest Insect Investigations. Pp. 75, pls. 4, fig. 1. Contribution from the Bureau of Entomology. Mar. 10, 1915. (Report No. 99, Office of the Secretary.) Price, 15 cents.

This is a technical report of interest to entomologists generally.

The Woolly Apple Aphis. By A. C. Baker, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 56, pls. 15, figs. 3. Contribution from the Bureau of Entomology. Mar. 31, 1915. (Report No. 101, Office of the Secretary.) Price, 20 cents.

A description of the life history and habits of the woolly aphis, technical in character, and of interest to entomologists.

Farm Women: Social and Labor Needs of Farm Women. Pp. 100. Compiled in the Office of Information. Feb. 17, 1915. (Report No. 103, Office of the Secretary.) Price, 15 cents.

*Same.* Domestic Needs of Farm Women. Compiled in the Office of Information. Mar. 18, 1915. (Report No. 104, Office of the Secretary.) Price, 15 cents.

*Same.* Educational Needs of Farm Women. Pp. 88. Compiled in the Office of Information. Mar. 22, 1915. (Report No. 105, Office of the Secretary.) Price, 15 cents.

*Same.* Economic Needs of Farm Women. Pp. 100. Compiled in the Office of Information. Mar. 24, 1915. (Report No. 106, Office of the Secretary.) Price, 15 cents.

NOTE.—Reports Nos. 103, 104, 105, and 106 contain extracts from letters received from farm women in response to an inquiry "How the United States Department of Agriculture can better meet the needs of farm housewives," with special reference to the provisions of instruction and practical demonstrations in home economics under the act of May 8, 1914, providing for cooperative agricultural extension work, etc.

### SERIALS.

*Journal of Agricultural Research*. Vol. 3, No. 6. March, 1915. Contents: Net Energy Values of Feeding Stuffs for Cattle. By Henry Prentiss Armsby and J. August Fries.—Air and Wind Dissemination of Ascospores of the Chestnut-Blight Fungus. By F. D. Heald, M. W. Gardner, and R. A. Studhalter.—Index and Contents of Volume III. Pp. 435-534+i-xiii, figs. 5. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

Experiment Station Record, Vol. XXXII, No. 3, Abstract Number. E. W. Allen, Ph. D., Editor. Pp. 201-300. Price, 15 cents.

*Same*, Vol. XXXII, No. 4, March, 1915. Pp. 301-400. Price, 15 cents.

The record contains numerous abstracts of the publications of the agricultural experiment stations and kindred institutions in this and other countries, articles and editorials on topics of special interest in agricultural science by American and foreign experts, and notes on the experiment stations. The Superintendent of Documents has fixed the price of this serial, which is now issued in two volumes a year, 10 numbers each, at \$1 a volume.

#### SERVICE AND REGULATORY ANNOUNCEMENTS.

These contain *only* information, instructions, and notices governing the enforcement of the pure food and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at 5 cents per copy.

Bureau of Animal Industry. February, 1915. No. 94. Pp. 21-28. Mar. 23, 1915.

Federal Horticultural Board. February, 1915. No. 13. Pp. 7-8. Mar. 23, 1915.

Office of Markets. Pp. 1-6. No. 3. Mar. 2, 1915.

Index to Service and Regulatory Announcements of the Bureau of Chemistry issued in 1914. Pp. 757-764. Mar. 25, 1915.

#### SOIL SURVEYS.

Soil Survey of Stark County, Ohio. By Charles N. Mooney, of the United States Department of Agriculture, and H. Foley Tuttle and A. Bonazzi, of the Ohio Agricultural Experiment Station. Pp. 39, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Reconnaissance Soil Survey of Ohio. By George N. Coffey, of the Ohio Agricultural Experiment Station, Thomas D. Rice, of the U. S. Department of Agriculture, and party. Pp. 134, pls. 8, maps 3 in colors, figs. 3. (From F. O. Soils, 1912.) Price 25 cents.

#### BULLETINS.

The Use of *Bacillus Bulgaricus* in Starters for Making Swiss or Emmental Cheese. By C. F. Doane and E. E. Eldredge, of the Dairy Division. Pp. 16, pl. 1. Contribution from the Bureau of Animal Industry. Mar. 22, 1915. (Department Bulletin 148.) Price, 5 cents.

This bulletin reports experimental work showing how to control undesirable fermentations and thus to provide a remedy for the most serious troubles which occur in making Swiss or Emmental cheese. It is of interest chiefly to manufacturers of that type of cheese.

The Varieties of Plums Derived From Native American Species. By W. F. Wight, Botanist, Office of Horticultural and Pomological Investigations. Pp. 44. Contribution from the Bureau of Plant Industry. (Professional Paper.) Mar. 13, 1915. (Department Bulletin 172.) Price, 5 cents.

This bulletin is of general interest, but especially to horticulturists engaged in studying varieties or doing work in plum breeding.

Group Classification and Varietal Descriptions of Some American Potatoes. By William Stuart, Horticulturist. Pp. 56, pls. 17. Contribution from the Bureau of Plant Industry. (Professional Paper.) Mar. 27, 1915. (Department Bulletin 176.) Price, 20 cents.

This bulletin is of value to plant breeders and potato specialists in all sections of the country.

Cooperative Organization Business Methods. By W. H. Kerr, Investigator in Market Business Practice, and G. A. Nashtoll, Assistant in Cooperative Organization Accounting. Pp. 24. Contribution from the Office of Markets and Rural Organization. Mar. 1, 1915. (Department Bulletin 178.) Price, 5 cents.

This is the first of a series of bulletins which will deal with the business methods of cooperative agricultural marketing organizations, and it covers matters of general interest to all forms of these organizations. It has been prepared to meet the demands for data relating to their business requirements and it contains somewhat elementary but necessary discussions on subjects connected with cooperative organizations. It is of value and importance to persons unfamiliar with the organization and work of cooperative associations.

The Importance of Thick Seeding in the Production of Milo in the San Antonio Region. By Stephen H. Hastings, Farm Superintendent. Pp. 21, figs. 9. Contribution from the Bureau of Plant Industry. Mar. 15, 1915. (Department Bulletin 188.) Price, 5 cents.

Gives results of experiments made at the San Antonio Experiment Farm which show that grain sorghum can be made a very satisfactory grain crop for that region if proper varieties are grown and the necessary cultural methods are followed.

**Demurrage Information for Farmers.** By G. C. White, Transportation Specialist. Pp. 27. Contribution from the Office of Markets and Rural Organization. Mar. 19, 1915. (Department Bulletin 191.) Price, 5 cents.

This bulletin, while intended especially for farmers and shippers of farm products, should be of interest to shippers of all commodities and to transportation men generally throughout the entire United States.

**Homemade Lime-Sulphur Concentrate.** By E. W. Scott, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 6. Contribution from the Bureau of Entomology. Mar. 31, 1915. (Department Bulletin 197.) Price 5 cents.

Describes experiments in making lime-sulphur concentrates and gives the most satisfactory formulas. Of interest to all practicing spraying in insecticide work.

#### FARMERS' BULLETINS.

**The Hessian Fly.** By F. M. Webster, In Charge of Cereal and Forage Insect Investigations. Pp. 20, figs. 17. Contribution from the Bureau of Entomology. Mar. 17, 1915. (Farmers' Bulletin 640.)

This bulletin is of interest in all the grain-growing sections of the United States. It is a revision of Circular No. 70 of the Bureau of Entomology.

**The Home Garden in the South.** By H. C. Thompson, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 28, figs. 8. Contribution from the Bureau of Plant Industry. Mar. 20, 1915. (Farmers' Bulletin 647.)

This bulletin is intended to encourage the growing of fresh vegetables for the farmer's table; it is suitable for distribution throughout the South.

**The San Jose Scale and Its Control.** By A. L. Quaintance, In Charge of Deciduous Fruit Insect Investigations. Pp. 27, figs. 17. Contribution from the Bureau of Entomology. Mar. 30, 1915. (Farmers' Bulletin 650.)

This bulletin is of interest to fruit growers generally.

**Cockroaches.** By C. L. Marlatt, Entomologist. Pp. 15, figs. 5. Contribution from the Bureau of Entomology. Mar. 27, 1915. (Farmers' Bulletin 658.)

This bulletin is of special interest to housekeepers throughout the United States. It is a revision of Circular No. 51 of the Bureau of Entomology, United States Department of Agriculture.

**The Agricultural Outlook.** Contribution from the Bureau of Crop Estimates. Mar. 20, 1915. Pp. 28. (Farmers' Bulletin 665.)

*Contents:* Stocks of grain on farms.—Wheat supplies.—Spring wheat production, by varieties.—Florida and California crop report.—The Hawaiian sugar crop.—International Institute crop report.—Trend of prices of farm products.—Stocks of wool in manufacturers' hands.—Time of transit to England through Panama Canal.—Countries prohibiting cereal exports.—Wages of farm labor.—Farm labor employment service.—Apples in cold storage.—Stocks of cereals and aggregate value per acre of crop production (tables).—Aggregate value per acre of crops, by States, 1909-1914.—Farm wages (tables).—Prices of farm products (tables).

#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Report of Chief of Weather Bureau, 1913-14.** [Administrative report, fiscal year 1914, with meteorological tables, calendar year 1913.] 1915. [4 pts.] 256 p. 4 p. of maps. 4°. Price, 60 cents, cloth.

**National Weather and Crop Bulletin, No. 3, March, 1915,** reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Tuesday, April to October; monthly remainder of year.) Price, 25 cents a year.

**Snow and Ice Bulletins for March 2, 9, 16, 23, 30.** These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,  
*Editor and Chief Division of Publications.*

#### SPECIAL NOTICE.

The Superintendent of Documents, Government Printing Office, has on hand, for sale only, "Outline Maps of the United States by Counties," 1913 edition, price, 10 cents. Send remittances for same to that official direct and not to this office.

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**This circular will be sent regularly to all who apply for it.**

# **United States Department of Agriculture,**

WASHINGTON, D. C., *April 30, 1915.*

## **MONTHLY LIST OF PUBLICATIONS.**

[APRIL, 1915.]

Copies of any of the publications listed herein, except the *Journal of Agricultural Research*, *Experiment Station Record*, and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

When this department's supply is exhausted, publications can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

### **REPORTS.**

Potash from Kelp. By Frank K. Cameron, In Charge Chemical, Physical, and Fertilizer Investigations. Pp. 122, pls. 40, figs. 2, maps 69, in portfolio. Contribution from the Bureau of Soils. Apr. 10, 1915. (Report No. 100, Office of the Secretary.) Price, \$2.00.

The department has no copies of this report in stock. It can be secured through the Office of the Superintendent of Documents only. Send all remittances to that official direct and not to this Office.

*Journal of Agricultural Research.* Vol. 4, No. 1. April, 1915.

*Contents:* Phoma Destructiva the Cause of a Fruit Rot of the Tomato. By Clara O. Jamieson.—Availability of the Nitrogen in Pacific Coast Kelps. By Guy R. Stewart.—Organic constituents of Pacific Coast Kelps. By D. R. Hoagland.—Sources of the Early Infections of Apple Bitter-Rot. By John W. Roberts.—A Bacteriological Study of Methods for the Disinfection of Hides Infected with Anthrax Spores. By F. W. Tilley.—Observations on Rhizina Inflata. By James R. Weir.—Pseudomonas Citri the Cause of Canker. By Clara H. Hasse.

Pp. 1-100, pls. 10. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

### **BULLETINS.**

Soils of Massachusetts and Connecticut With Especial Reference to Apples and Peaches. By Henry J. Wilder, Scientist in Soil Survey. Pp. 73, pls. 21, figs. 2. Contribution from the Bureau of Soils. Apr. 5, 1915. (Department Bulletin 140.) Price, 25 cents.

Of especial interest to fruit growers in the States named.

Tests of Wood Preservatives. By Howard F. Weiss, Director, and C. H. Teesdale, In Charge of Wood Preservation, Forest Products Laboratory, Madison, Wis. Pp. 20, pls. 6. Contribution from the Forest Service. (Professional Paper.) Apr. 12, 1915. (Department Bulletin 145.) Price, 10 cents.

Contains results of tests of various commercial compounds and chemicals claimed to have wood preservative qualities.

The Life History and Habits of the Pear Thrips in California. By S. W. Foster and P. R. Jones, Entomological Assistants, Deciduous Fruit Investigations. Pp. 52, pls. 5, figs. 14. Contribution from the Bureau of Entomology. (Professional Paper.) Apr. 13, 1915. (Department Bulletin 173.) Price, 15 cents.

Contains the history and economic importance of, and describes character of injury done by pear thrips. Is technical and of interest to entomologists.

**Farm Experience With the Tractor.** By Arnold P. Yerkes, Scientific Assistant, and H. H. Mowry, Assistant Agriculturist, Office of Farm Management. Pp. 44. Contribution from the Bureau of Plant Industry. Apr. 15, 1915. (Department Bulletin 174.) Price, 5 cents.

This bulletin is intended to make available to farmers who contemplate buying a tractor the experience of many other farmers who have already used one; it is suitable for distribution west of the Mississippi River.

**Mushrooms and Other Common Fungi.** By Flora W. Patterson, Mycologist, and Vera K. Charles, Assistant Mycologist, Office of Pathological Collections and Inspection Work. Pp. 64, pls. 38, fig. 1. Contribution from the Bureau of Plant Industry. Apr. 29, 1915. (Department Bulletin 175.) Price, 30 cents.

This bulletin describes various species of edible and poisonous mushrooms and is for general distribution.

**Native American Species of Prunus.** By W. F. Wight, Botanist. Pp. 75, pls. 13, figs. 3. Contribution from the Bureau of Plant Industry. (Professional Paper.) Apr. 2, 1915. (Department Bulletin 179.) Price, 20 cents.

This bulletin is intended for horticulturists in all parts of the United States, especially those who are studying varieties or doing work in plant breeding.

**Soil Erosion in the South.** By R. O. E. Davis, Scientist in Soil Laboratory Investigations. Pp. 23, pls. 9. Contribution from the Bureau of Soils. Apr. 16, 1915. (Department Bulletin 180.) Price, 10 cents.

This bulletin is of general interest, but especially in Virginia, Tennessee, Missouri, Mississippi, Alabama, Georgia, South Carolina, and North Carolina.

**A Report on the Methods and Costs of Reclaiming the Overflowed Lands Along the Big Black River, Mississippi.** By Lewis A. Jones, Drainage Engineer, Assisted by W. J. Schlick, Drainage Engineer, and C. E. Ramser, Assistant Drainage Engineer. Pp. 39, figs. 9, maps 11. Contribution from the Office of Experiment Stations. (Professional Paper.) Apr. 12, 1915. (Department Bulletin 181.) Price, 30 cents.

This report is intended for engineers, landowners, and others interested in drainage enterprises in regions where the conditions are similar to those here described; it is suitable for distribution in the Gulf Coast States.

**Morphology of the Barley Grain With Reference to Its Enzym-Secreting Areas.** By Albert Mann, Plant Morphologist, and H. V. Harlan, Agronomist in Charge of Barley Investigations. Pp. 32, pls. 8, figs. 5. Contribution from the Bureau of Plant Industry. (Professional Paper.) Apr. 13, 1915. (Department Bulletin 183.) Price, 15 cents.

This paper is intended for distribution to agronomists, station directors, brewery chemists, and selected maltsters.

**The Huisache Girdler.** By M. M. High, Entomological Assistant, Truck Crop and Stored Product Insect Investigations. Pp. 9, pls. 4. Contribution from the Bureau of Entomology. (Professional Paper.) Apr. 8, 1915. (Department Bulletin 184.) Price, 5 cents.

This bulletin contains a technical description of an insect infesting the huisache tree of the Southwest. The form of injury is discussed and methods of control are given.

**Bird Migration.** By Wells W. Cooke, Assistant Biologist. Pp. 47, pls. 4, figs. 20. Contribution from the Bureau of Biological Survey. Apr. 17, 1915. (Department Bulletin 185.) Price, 10 cents.

This bulletin discusses the subject of bird migration. Of interest to nature students and to investigators of the economic relation of birds to agriculture.

**Studies of the Codling Moth in the Central Appalachian Region.** By F. E. Brooks and E. B. Blakeslee, Entomological Assistants, Deciduous Fruit Insect Investigations. Pp. 49, pl. 1, figs. 23. Contribution from the Bureau of Entomology. Apr. 12, 1915. (Department Bulletin 189.) Price, 10 cents.

Contains results of investigations as to the appearance of the Codling Moth in Virginia, Maryland, and West Virginia, and describes some of its natural enemies.

**The Drainage of Irrigated Lands.** By R. A. Hart, Supervising Engineer. Pp. 34, figs. 22. Contribution from the Office of Experiment Stations. Apr. 24, 1915. (Department Bulletin 190.) Price, 10 cents.

The information in this bulletin is intended for drainage engineers and landowners of the arid West. It is not applicable to the humid section of the United States.

**Insects Affecting Vegetable Crops in Porto Rico.** By Thomas H. Jones, Entomological Assistant, Truck Crop and Stored Product Insect Investigations. Pp. 11, pls. 4. Contribution from the Bureau of Entomology. (Professional Paper.) Apr. 8, 1915. (Department Bulletin 192.) Price, 5 cents.

This bulletin enumerates the more common insects attacking vegetable crops in Porto Rico; of interest to entomologists.

**The Drainage of Jefferson County, Texas.** By H. A. Kipp, A. G. Hall, and S. W. Frescoln, Drainage Engineers. Pp. 40, maps 2. Contribution from the Office of Experiment Stations. (Professional Paper.) Apr. 30, 1915. (Department Bulletin 193.) Price, 15 cents.

This report is intended especially for engineers, drainage district officials, and present and prospective owners of land near the Gulf of Mexico, particularly in Texas and Louisiana. The run-off formula and discussion will interest all engineers concerned with land drainage.

**Report Upon the Cypress Creek Drainage District, Desha and Chicot Counties, Arkansas.** By S. H. McCrory, O. G. Baxter, D. L. Yarnell, L. A. Jones, and W. J. Schlick, Drainage Engineers. Pp. 20, fig. 1. maps 4. Contribution from the Office of Experiment Stations. (Professional Paper.) Apr. 21, 1915. (Department Bulletin 198.) Price, 40 cents.

This bulletin will be of interest to landowners, engineers, and others interested in the reclamation of swamp and overflowed lands along the Mississippi River.

**Loss in Tonnage of Sugar Beets by Drying.** By Harry B. Shaw, Assistant Pathologist, Cotton and Truck Disease and Sugar-Plant Investigations. Pp. 12, figs. 5. Contribution from the Bureau of Plant Industry. Apr. 7, 1915. (Department Bulletin 199.) Price, 5 cents.

This bulletin takes up the subject of the losses incurred by allowing sugar beets to lie in the field. The data applying specifically to conditions in the Western States, such as Kansas, Colorado, and Arizona, but they are equally applicable to the regions having relatively higher humidity.

**Field Studies of the Crown-Gall of Sugar Beets.** By C. O. Townsend, Pathologist in Charge of Sugar-Beet Investigations. Pp. 8, pls. 2, fig. 1. Contribution from the Bureau of Plant Industry. (Professional Paper.) Apr. 30, 1915. (Department Bulletin 203.) Price, 5 cents.

This bulletin gives the distribution, appearance, cause, quality, and effects of beet galls, with methods of control.

**Seed Production of Western White Pine.** By Raphael Zon, Chief of Forest Investigations. Pp. 15. Contribution from the Forest Service. (Professional Paper.) Apr. 17, 1915. (Department Bulletin 210.) Price, 5 cents.

This bulletin contains a report upon an investigation of the seed production of western white pine and a discussion of the method of measuring the seed crop.

**The Use of Land in Teaching Agriculture in Secondary Schools.** By Eugene Merritt, Assistant in Agricultural Education. Pp. 12. Contribution from the Office of Experiment Stations. Apr. 15, 1915. (Department Bulletin 213.) Price, 5 cents.

This bulletin describes how land is being used in the teaching of agriculture in secondary schools and discusses some of the problems involved. It is written to aid all persons who are engaged or interested in the teaching of agriculture.

**Cotton Warehouses: Storage Facilities Now Available in the South.** By Robert L. Nixon, Assistant in Cotton Marketing. Pp. 26. Contribution from the Office of Markets and Rural Organization. Apr. 26, 1915. (Department Bulletin 216.) Price, 5 cents.

This bulletin deals with the cotton warehouse situation of the South, with special reference to conditions in Georgia and North Carolina. It should be of special interest to farmers, warehousemen, and cotton factors, merchants, and bankers of the South.

**Strawberry Supply and Distribution in 1914.** By Wells A. Sherman, Specialist in Market Surveys; Houston F. Walker, Scientific Assistant; and O. W. Schleussner, Market Assistant. Pp. 10, figs. 2. Contribution from the Office of Markets and Rural Organization. Apr. 20, 1915. (Department Bulletin 237.) Price, 5 cents.

This bulletin is of general interest to strawberry growers, shippers, dealers, transportation companies, and consumers, and to all engaged in the trade in berries and fruits.

**Contents and Index to Technical Series No. 25, Bureau of Entomology.** Pp. v.+41-43. Apr. 26, 1915. Price, 5 cents.

**Revision of the American Marmots.** By Arthur H. Howell, Assistant Botanist, Biological Survey. Pp. 80, pls. 15, figs. 3. Apr. 7, 1915. (North American Fauna, No. 37.) Price, 20 cents.

This report furnishes descriptions of 26 forms and contains a series of maps showing their geographic distribution.

**Effect of Fertilizers on the Physical Properties of Hawaiian Soils.** By William McGeorge, Assistant Chemist. Pp. 31, figs. 2. Apr. 24, 1915. (Bulletin 38, Hawaii Agricultural Experiment Station.) Price, 5 cents.

**Marketing Maine Potatoes.** By C. T. More, Investigator in Marketing Perishable Products, and G. V. Branch, Investigator in City Marketing, Office of Markets and Rural Organization. Pp. 7. Apr. 2, 1915. (Circular 48, Office of the Secretary.)

Contains suggestions for improving marketing conditions, and grading rules.

Motor Vehicle Registrations and Revenues, 1914. Prepared by Division of Road Economics, Office of Public Roads, February, 1915. Pp. 1. (Circular 49, Office of Secretary.)

#### FARMERS' BULLETINS.

**Manufacture and Use of Unfermented Grape Juice.** By George C. Husmann, Pomologist in Charge of Viticultural Investigations, Office of Horticultural and Pomological Investigations. Pp. 16, figs. 14. Contribution from the Bureau of Plant Industry. Apr. 9, 1915. (Farmers' Bulletin 644.)

This bulletin gives instructions for making grape juice for home use and in commercial quantities. The bulletin is suitable for distribution throughout the country.

**The Control of Root-Knot.** By Ernst A. Bessey, Collaborator, and L. P. Byars, Pathologist, Office of Cotton and Truck Disease and Sugar-Plant Investigations. Pp. 19, figs. 20. Contribution from the Bureau of Plant Industry. Apr. 1, 1915. (Farmers' Bulletin 648.)

This bulletin describes conditions favoring root-knot, methods of spreading the parasites, and suggests remedies for its control.

**The Sheep-Killing Dog.** By V. O. McWhorter, Animal Husbandry Division. Pp. 13, figs. 3. Contribution from the Bureau of Animal Industry. Apr. 16, 1915. (Farmers' Bulletin 652.)

Shows the annual loss caused by sheep-killing dogs and discusses state laws relating to same.

**How Farmers May Improve Their Personal Credit.** By C. W. Thompson, Specialist in Rural Organization Work. Pp. 14. Contribution from the Office of Markets and Rural Organization. Apr. 3, 1915. (Farmers' Bulletin 654.)

Intended to give farmers some practical methods for improving their personal credit through cooperation. Of interest to farmers generally, and particularly to those of the South and of the West.

**Cottonseed Meal for Feeding Beef Cattle.** By W. F. Ward, Senior Animal Husbandman in Beef Cattle Investigations, Animal Husbandry Division. Pp. 8. Contribution from the Bureau of Animal Industry. Apr. 10, 1915. (Farmers' Bulletin 655.)

Gives the results of experiments in feeding cottonseed meal to beef cattle in varying proportions and offers suggestions for its profitable use. It will be of interest to farmers and cattle raisers generally.

**The Community Egg Circle.** By C. E. Bassett, Specialist in Cooperative Organization, and W. H. Kerr, Investigator in Market Business Practice. Pp. 7. Contribution from the Office of Markets and Rural Organization. Apr. 6, 1915. (Farmers' Bulletin 656.)

Intended for all farmers who would be interested in the formation of a community circle for the marketing of eggs. It would be of especial interest at this time to farmers in the cotton belt who desire to diversify their farming because of the economic crisis which adversely affects the cotton crop at present.

**The True Clothes Moths.** By C. L. Marlatt, Entomologist. Pp. 8, figs. 3. Contribution from the Bureau of Entomology. Apr. 5, 1915. (Farmers' Bulletin 659.)

This bulletin is of interest to housekeepers and those who have anything to do with fur and wool, in either the raw or the manufactured state.

**A Method of Analyzing the Farm Business.** By E. H. Thomson, Agriculturist, and H. M. Dixon, Scientific Assistant, Office of Farm Management. Pp. 26. Contribution from the Bureau of Plant Industry. Apr. 24, 1915. (Farmers' Bulletin 661.)

In this bulletin a method is outlined for an analysis of the farm business to determine the investment, receipts, expenses, and labor income involved.

**Strawberry Growing in the South.** By H. C. Thompson, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 20, figs. 11. Contribution from the Bureau of Plant Industry. Apr. 30, 1915. (Farmers' Bulletin 664.)

This bulletin is intended to meet the needs of all growers of strawberries in the South, more especially those who are producing on a commercial scale.

**Foot and Mouth Disease.** By John R. Mohler, V. M. D., Assistant Chief, Bureau of Animal Industry. Pp. 16, figs. 7. Contribution from the Bureau of Animal Industry. Apr. 22, 1915. (Farmers' Bulletin 666.)

This bulletin is largely a revision of the department's earlier publications on the subject. It is intended for general distribution.

**The Agricultural Outlook.** Contribution from the Bureau of Crop Estimates. Apr. 23, 1915. Pp. 28. (Farmers' Bulletin 672.)

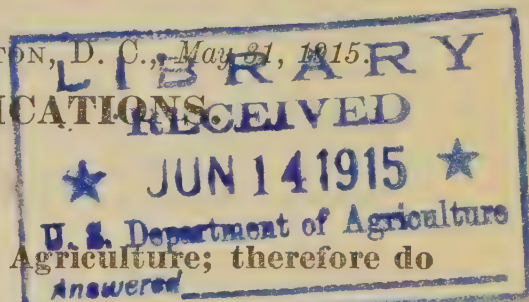
This circular will be sent regularly to all who apply for it.

## United States Department of Agriculture,

WASHINGTON, D. C., May 31, 1915.

### MONTHLY LIST OF PUBLICATIONS

[MAY, 1915.]



No publications are sold by the Department of Agriculture; therefore do not send money to this office.

Copies of any of the publications listed herein, except the *Journal of Agricultural Research*, *Experiment Station Record*, and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

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#### REPORTS.

Yearbook of the U. S. Department of Agriculture, 1914. Pp. 715, pls. 53, figs. 45. Price, 75 cents.

This Yearbook contains the annual report of the Secretary, 64 pages; 22 miscellaneous articles, 439 pages; an appendix, 183 pages; an index, 26 pages. Only 6 out of each 100 copies are allotted to this department, which number is insufficient to supply even its regular correspondents. Other applicants are therefore respectfully referred to their Representative or Delegate in Congress, as the other 94 per cent is allotted to that body. The Superintendent of Documents, Government Printing Office, Washington, D. C., has it for sale at 75 cents per copy.

#### SERIALS.

*Journal of Agricultural Research*. Vol. 4, No. 2. May, 1915.

*Contents*: Wilt of Gipsy-Moth Caterpillars. By R. W. Glaser.—Effect of Temperature on Germination and Growth of the Common Potato-Scab Organism. By Michael Shapovalov.—Seedling Diseases of Sugar Beets and Their Relation to Root-Rot and Crown-Rot. By H. A. Edson.—Phoma Betae on the Leaves of the Sugar Beet. By Venus W. Pool and M. B. McKay.—Notes on the Hydrocyanic-Acid Content of Sorghum. By J. J. Willaman and R. M. West.—Effect on Soil Moisture of Changes in the Surface Tension of the Soil Solution Brought About by the Addition of Soluble Salts. By P. E. Karaker. Pp. 101-192, pls. XI-XXVII, figs. 22. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

*Experiment Station Record*, Vol. XXXI, Index Number. May 4, 1915. E. W. Allen, Ph. D.; Editor. Pp. 901-1000. Price, 15 cents.

*Same*, Vol. XXXII, No. 5, April, 1915. Pp. 401-500. Price, 15 cents.

*Same*, Vol. XXXII, No. 6. Abstract Number. Pp. 501-600. Price, 15 cents.

*Same*, Vol. XXXII, No. 7, May, 1915. Pp. 601-699. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at \$1 a volume.

*The Monthly Crop Report*. Vol. 1, No. 1. May 10, 1915. Pp. 1-8. (Bureau of Crop Estimates.)

The Monthly Crop Report is a resumption, in size and nature of material, of the Crop Reporter, which was discontinued with the issue of June 19, 1914. It contains data relating to agriculture, including estimates of acreage, condition, yield, prices and value of crops and live stock. The publication of the Agricultural Outlook, which formerly contained this matter, was discontinued with the issue of April, 1915.

#### SERVICE AND REGULATORY ANNOUNCEMENTS.

These contain *only* information, instructions, and notices governing the enforcement of the pure food and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. Free distribution is limited to persons in the employ of the department, to public officials whose duties

render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at 5 cents per copy.

Bureau of Animal Industry. April, 1915. No. 96. Pp. 41-52. May 22, 1915. Price, 5 cents.

Bureau of Chemistry. No. 13. Pp. 1-8. May 3, 1915. Price, 5 cents.

Bureau of Chemistry. Supplement No. 2. Pp. 61-123. May 14, 1915. Price, 5 cents.

Federal Horticultural Board. April, 1915. No. 15. Pp. 17-34. May 29, 1915. Price, 5 cents.

Federal Horticultural Board. Index to Service and Regulatory Announcements issued in 1914. Pp. 91-96. May 14, 1915. Price, 5 cents.

Rules and Regulations Governing the Importation of Cotton Lint into the United States. Pp. 10. Federal Horticultural Board. May 14, 1915.

#### SOIL SURVEYS.

Soil Survey of Cleburne County, Alabama. By H. G. Lewis and C. S. Waldrop, of the U. S. Department of Agriculture, and F. W. Kolb, of the Alabama Department of Agriculture and Industries. Pp. 38, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Russell County, Alabama. By N. Eric Bell, of the Alabama Department of Agriculture and Industries, and Lewis A. Hurst and J. M. Snyder, of the U. S. Department of Agriculture. Pp. 50, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Stewart County, Georgia. By David D. Long, of the Georgia State College of Agriculture, and M. W. Beck, E. C. Hall, and W. W. Burdette, of the U. S. Department of Agriculture. Pp. 66, pls. 2, fig. 1, map. (From F. O. Soils, 1913.)

Soil Survey of Delaware County, Indiana. By Lewis A. Hurst, of the U. S. Department of Agriculture, and E. J. Grimes of the Indiana Department of Geology. Pp. 31, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Hendricks County, Indiana. By W. E. Tharp, of the U. S. Department of Agriculture, and E. J. Quinn of the Indiana Department of Geology. Pp. 38, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Nodaway County, Missouri. By E. S. Vanatta, of the U. S. Department of Agriculture, and E. W. Knobel and W. I. Watkins, of the University of Missouri. Pp. 31, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Oneida County, New York. By E. T. Maxon and M. Earl Carr, of the U. S. Department of Agriculture, and E. H. Stevens, of the New York State College of Agriculture. Pp. 59, fig. 1, maps, 2. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Logan and Mingo Counties, West Virginia. By W. J. Latimer. Pp. 30, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

#### BULLETINS.

Zygadenus, or Death Camas. By C. Dwight Marsh and A. B. Clawson, Physiologists, and Hadleigh Marsh, Veterinary Inspector. Pp. 46, pls. 6, figs. 4. Contribution from the Bureau of Plant Industry and Bureau of Animal Industry. (Professional Paper.) May 13, 1915. (Department Bulletin 125.) Price, 15 cents.

This paper is intended to supply general information on the relation of Zygadenus to the losses of live stock on the western stock ranges; it is suitable for distribution throughout the western third of the United States.

The Flow of Water in Irrigation Channels. By Fred. C. Scobey, Irrigation Engineer. Pp. 68, pls. 20, figs. 9. Contribution from the Office of Experiment Stations. (Professional Paper.) May 10, 1915. (Department Bulletin 194.) Price, 25 cents.

This bulletin treats of the subject of flowing water in irrigation channels. It is based on field tests made for the purpose of determining the retardation factor in Kutter's formula under the various conditions found in practice. The data secured are intended to aid in the design and construction of irrigation and similar channels. This publication is offered for use of engineers designing and measuring irrigation, drainage, and power channels, and for courts and attorneys at law interested in cases involving the carrying capacities of open channels.

Potato Breeding and Selection. By William Stuart, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 35, pls. 16, figs. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) May 20, 1915. (Department Bulletin 195.) Price, 15 cents.

The investigations noted in this bulletin describe the methods used in raising potato seedlings from hand-pollinated seeds, and the selection from these seedlings of the promising plants for the development of a new variety.

Methods followed in the Commercial Canning of Foods. By A. W. Bitting. Pp. 79, pls. 3. Contribution from the Bureau of Chemistry. (Professional Paper.) May 29, 1915. (Department Bulletin 196.) Price, 10 cents.

This bulletin includes information relating to Commercial Canning only, and is of no interest to home canners.

A Maggot Trap in Practical Use: An Experiment in House-Fly Control. By R. H. Hutchison, Scientific Assistant. Pp. 15, pls. 3, figs. 3. Contribution from the Bureau of Entomology. May 4, 1915. (Department Bulletin 200.) Price, 5 cents.

This bulletin describes the operations of a maggot trap based on the migratory habit of house-fly maggots just before pupation. It will be of interest to all farmers and to those industries in which the accumulation of refuse may encourage the propagation of the house fly.

Native Pasture Grasses of the United States. By David Griffiths, of the Bureau of Plant Industry, and George I. Bidwell and Charles E. Goodrich, of the Bureau of Chemistry. Pp. 52, pls. 9. Contribution from the Bureau of Plant Industry and Bureau of Chemistry. (Professional Paper.) May 26, 1915 (Department Bulletin 201.) Price, 15 cents.

This bulletin contains the results of investigations and compilations, mainly of experiment station literature, that will be of value to chemists, agricultural writers, and ranchmen.

The Alcohol Test in Relation to Milk. By S. Henry Ayers, Bacteriologist and William T. Johnson, Jr., Scientific Assistant, Dairy Division. Pp. 35, figs. 4. Contribution from the Bureau of Animal Industry. (Professional Paper.) May 12, 1915. (Department Bulletin 202.) Price, 5 cents.

Of interest to creameries and manufacturers of dairy by-products.

Report on the Gipsy Moth Work in New England. By A. F. Burgess, In Charge of Gipsy Moth and Brown-Tail Moth Work. Pp. 32, pls. 11, figs. 3. Contribution from the Bureau of Entomology. May 21, 1915. (Department Bulletin 204.) Price, 30 cents.

This publication is prepared to show the different lines of work which are being taken up and the results that have been secured.

Eleven Important Wild-Duck Foods. By W. L. McAtee, Assistant Biologist. Pp. 25, figs. 23. Contribution from the Bureau of Biological Survey. May 20, 1915. (Department Bulletin 205.) Price, 5 cents.

This bulletin is for general distribution, and shows how 11 groups of plants may be successfully used as food for wild ducks in localities where now unknown.

The Woolgrower and the Wool Trade. By F. R. Marshall and L. L. Heller, Animal Husbandry Division. Pp. 32, pls. 11. Contribution from the Bureau of Animal Industry. May 25, 1915. (Department Bulletin 206.) Price, 15 cents.

This bulletin discusses the preparation of wools for market and explains the effect upon the value of wool of the factors under the control of the grower. It is of interest to all sheep owners.

Yields of Native Prickly Pear in Southern Texas. By David Griffiths, Agriculturist, Office of Farm Management. Pp. 11, pls. 2. Contribution from the Bureau of Plant Industry. May 13, 1915. (Department Bulletin 208.) Price, 5 cents.

Of interest to stock raisers in the semiarid districts.

Factors Affecting Range Management in New Mexico. By E. O. Wooton, Agriculturist, Office of Farm Management. Pp. 39, pls. 9, figs. 3. Contribution from the Bureau of Plant Industry. May 26, 1915. (Department Bulletin 211.) Price, 15 cents.

The various factors influencing the live-stock industry in New Mexico, especially as affecting range management, are presented and discussed in this bulletin.

Observations on the Pathology of the Jack Pine. By James R. Weir, Forest Pathologist. Pp. 10, pl. 1, figs. 4. Contribution from the Bureau of Plant Industry. (Professional Paper.) May 26, 1915. (Department Bulletin 212.) Price, 5 cents.

A discussion of the various fungi and diseases affecting jack pine.

Spring Wheat in the Great Plains Area. Relation of Cultural Methods to Production. By E. C. Chilcott, Agriculturist in Charge, and J. S. Cole and W. W. Burr, Assistants, Office of Dry-Land Agriculture. Pp. 43. Contribution from the Bureau of Plant Industry. May 1, 1915. (Department Bulletin 214.) Price, 10 cents.

This bulletin is intended for all who are interested in the agricultural possibilities of the Great Plains area.

Composition of Corn (Maize) Meal Manufactured by Different Processes and the Influence of Composition on the Keeping Qualities. By A. L. Winton, W. C. Burnet, and J. H. Bornmann. Pp. 31. Contribution from the Bureau of Chemistry. (Professional Paper.) May 21, 1915. (Department Bulletin 215.) Price, 5 cents.

This bulletin is of interest to corn millers and dealers in corn and corn products and is suitable for distribution in all parts of the country.

Mortality Among the Waterfowl Around Great Salt Lake, Utah. (Preliminary Report.) By Alex Wetmore, Assistant Biologist. Pp. 10, pls. 3. Contribution from the Bureau of Biological Survey. May 26, 1915. (Department Bulletin 217.) Price, 5 cents.

This bulletin is a report of progress in investigating the causes of mortality among ducks and other waterfowl in marshes about Great Salt Lake, Utah.

Oats in the Great Plains Area. Relation of Cultural Methods to Production. By E. C. Chilcott, Agriculturist in Charge, and J. S. Cole and W. W. Burr, Assistants, Office of Dry-Land Agriculture. Pp. 42, fig. 1. Contribution from the Bureau of Plant Industry. May 28, 1915. (Department Bulletin 218.) Price, 10 cents.

This bulletin is intended for all who are interested in the agricultural possibilities of the Great Plains area.

Barley in the Great Plains Area. Relation of Cultural Methods to Production. By E. C. Chilcott, Agriculturist in Charge, and J. S. Cole and W. W. Burr, Assistants, Office of Dry-Land Agriculture. Pp. 32, figs. 2. Contribution from the Bureau of Plant Industry. May 24, 1915. (Department Bulletin 222.) Price, 5 cents.

This bulletin is intended for all who are interested in the agricultural possibilities of the Great Plains area.

A System of Accounting for Cooperative Fruit Associations. By G. A. Nahstoll, Assistant in Cooperative Organization Accounting, and W. H. Kerr, Investigator in Market Business Practice. Pp. 25. Contribution from the Office of Markets and Rural Organization. May 7, 1915. (Department Bulletin 225.) Price, 5 cents.

This bulletin should be of interest to all cooperative fruit associations throughout the country.

The Verbena Bud Moth. By D. E. Fink, Entomological Assistant. Pp. 7, pls. 3, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) May 27, 1915. (Department Bulletin 226.) Price, 5 cents.

This bulletin gives the life history of the verbena bud moth, its food plants, and methods for its control.

**Effect of Frequent Cutting on the Water Requirement of Alfalfa and Its Bearing on Pasturage.** By Lyman J. Briggs, Biophysicist in Charge of Biophysical Investigations, and H. L. Shantz, Physiologist, Office of Alkali and Drought Resistant Plant Investigations. Pp. 6, figs. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) May 22, 1915. (Department Bulletin 228.) Price, 5 cents.

This bulletin is of interest to growers of alfalfa in the semiarid regions.

**Relation of the Arizona Wild Cotton Weevil to Cotton Planting in the Arid West.** By B. R. Coad, Entomological Assistant, Southern Field Crop Insect Investigations. Pp. 12, pls. 4. Contribution from the Bureau of Entomology. May 27, 1915. (Department Bulletin 233.) Price, 5 cents.

Of interest to all cotton growers in the Southwest.

**A System of Accounts for Farmers' Cooperative Elevators.** By John R. Humphrey, Assistant in Cooperative Grain Elevator Accounting, and W. H. Kerr, Investigator in Market Business Practice. Pp. 30. Contribution from the Office of Markets and Rural Organization. May 1, 1915. (Department Bulletin 236.) Price, 10 cents.

This bulletin is intended for all farmers' cooperative and other elevators throughout the United States. It contains copies of forms and a description of their uses for a system of accounts which is being recommended by the Office of Markets and Rural Organization, United States Department of Agriculture, as a uniform system for farmers' cooperative elevators.

**Citrus Fertilization Experiments in Porto Rico.** By C. F. Kinman, Horticulturist. Pp. 33, pls. 2. May 14, 1915. (Bulletin 18, Porto Rico Agricultural Experiment Station.) Price, 10 cents.

**Cooperative Agricultural Extension Work.** Pp. 12. Contribution from the Office of Experiment Stations. May 3, 1915. (Circular 47, Office of the Secretary.) Price, 5 cents.

#### FARMERS' BULLETINS.

**The Chinch Bug.** By F. M. Webster, In Charge of Cereal and Forage Insect Investigations. Pp. 28, figs. 9. Contribution from the Bureau of Entomology. May 6, 1915. (Farmers' Bulletin 657.)

This bulletin describes the forms and stages of the chinch bug, its habits and natural enemies, and suggests methods of preventing its ravages.

**Weeds: How to Control Them.** By H. R. Cox, Agriculturist, Office of Farm Management. Pp. 29, figs. 27. Contribution from the Bureau of Plant Industry. May 12, 1915. (Farmers' Bulletin 660.)

For general distribution.

**The Apple-Tree Tent Caterpillar.** By A. L. Quaintance, In Charge of Deciduous Fruit Insect Investigations. Pp. 10, figs. 7. Contribution from the Bureau of Entomology. May 11, 1915. (Farmers' Bulletin 662.)

Of interest to all fruit growers.

**Breaking and Training Colts.** By V. G. Stambaugh, Animal Husbandry Division. Pp. 16, figs. 11. Contribution from the Bureau of Animal Industry. May 22, 1915. (Farmers' Bulletin 667.)

This bulletin is intended for general distribution.

**The Squash-Vine Borer.** By F. H. Chittenden, In Charge of Truck Crop and Stored Product Insect Investigations. Pp. 6, figs. 2. Contribution from the Bureau of Entomology. May 26, 1915. (Farmers' Bulletin 668.)

This bulletin is a revision of Circular No. 38 of the Bureau of Entomology, U. S. Department of Agriculture.

**Fiber Flax.** By Frank C. Miles, Scientific Assistant, Fiber-Plant Investigations. Pp. 19, figs. 10. Contribution from the Bureau of Plant Industry. May 25, 1915. (Farmers' Bulletin 669.)

This bulletin is intended for distribution throughout those Northern and Pacific Coast States where the conditions of climate are favorable for the growth of fiber flax.

**Harvest Mites, or "Chiggers."** By F. H. Chittenden, In Charge of Truck Crop and Stored Product Insect Investigations. Pp. 7, figs. 3. Contribution from the Bureau of Entomology. May 26, 1915. (Farmers' Bulletin 671.)

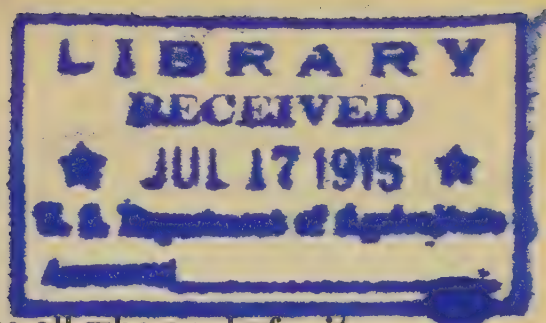
This bulletin, which is a reprint, with revision, of Circular No. 77 of the Bureau of Entomology, treats of the harvest mite and means for the protection and relief of human beings subject to its attack, together with methods of eradication.

#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**National Weather and Crop Bulletin, Nos. 7, 8, 9, 10, May, 1915,** reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

JOS. A. ARNOLD,  
*Editor and Chief Division of Publications.*



This circular will be sent regularly to all who apply for it.

## United States Department of Agriculture,

WASHINGTON, D. C., *June 30, 1915.*

### MONTHLY LIST OF PUBLICATIONS.

[JUNE, 1915.]

No publications are sold by the Department of Agriculture; therefore do not send money to this office.

Copies of any of the publications listed herein, except the *Journal of Agricultural Research*, *Experiment Station Record*, and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

When this department's supply is exhausted, publications can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

#### REPORTS.

Contributions Toward a Classification and Biology of the North American Cerambycidae: Larvæ of the Prioninae. By F. C. Craighead, Entomological Assistant, Forest Insect Investigations. Pp. 24, pls. 8. Contribution from the Bureau of Entomology. June 25, 1915. (Report No. 107, Office of the Secretary.) Price, 10 cents.

Technical in character and of interest to Entomologists.

#### SERIALS.

*Journal of Agricultural Research*, Vol. 4, No. 3. June, 1915.

*Contents:* Relation Between Puccinia Graminis and Plants Highly Resistant to Its Attack. By E. C. Stakman.—Antagonism Between Anions as Affecting Barley Yields on a Clay-Adobe Soil. By Charles B. Lipman and W. F. Gericke.—A New Wheat Thrips. By E. O. G. Kelly.—Cytological Studies of *Azotobacter Chroococcum*. By Augusto Bonazzi.—Influence of Soil Moisture upon the Rate of Increase in Sugar-Beet Root-Louse Colonies. By J. R. Parker.—A New Leaf and Twig Disease of *Picea Engelmanni*. By James R. Weir.—Some Sugar-Cane Root-Boring Weevils of the West Indies. By W. Dwight Pierce.—A Contribution to the Life History of *Spongospora Subterranea*. By L. O. Kunkel. Pp. 193-278, pls. 16. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

*Experiment Station Record*, Vol. XXXII, No. 8. June, 1915. E. W. Allen, Ph. D., Editor. Pp. 701-800. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at \$1 a volume.

*The Monthly Crop Report*, Vol. 1, No. 2. June 12, 1915. Pp. 1-8. (Bureau of Crop Estimates.)

The Monthly Crop Report is a resumption, in size and nature of material, of the *Crop Reporter*, which was discontinued with the issue of June 19, 1914. It contains data relating to agriculture, including estimates of acreage, condition, yield, prices, and value of crops and live stock. The publication of the *Agricultural Outlook*, which formerly contained this matter, was discontinued with the issue of April, 1915.

## SERVICE AND REGULATORY ANNOUNCEMENTS.

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Bureau of Chemistry. Supplement No. 3. Pp. 125-184. June 5, 1915. Price, 5 cents.

Bureau of Chemistry. Supplement No. 4. Pp. 185-239. June 15, 1915. Price, 5 cents.

Insecticide and Fungicide Board. March and April, 1915. Pp. 15-30. No. 9. June 11, 1915. Price, 5 cents.

Bureau of Plant Industry. No. 2. Pp. 9-14. June 17, 1915. Price, 5 cents.

## SOIL SURVEYS.

Soil Survey of Escambia County, Alabama. By R. T. Avon Burke and J. M. Snyder, of the U. S. Department of Agriculture, and A. M. O'Neal, jr., and F. W. Kolb, of the Alabama Department of Agriculture and Industries. Pp. 51, fig. 1. map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Pope County, Arkansas. By Clarence Lounsbury and E. B. Deeter. Pp. 51, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Greene County, Missouri. By H. H. Krusekopf, of the University of Missouri, and F. Z. Hutton, of the U. S. Department of Agriculture. Pp. 38, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Perry County, Missouri. By B. W. Tillman, of the U. S. Department of Agriculture, and C. E. Deardorff, of the University of Missouri. Pp. 34, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Douglas County, Nebraska. By A. H. Meyer, E. H. Smies, and T. M. Bushnell, of the U. S. Department of Agriculture, and R. R. Spafford, R. R. Burn, and C. W. Smith, of the Nebraska Soil Survey. Pp. 48, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Saunders County, Nebraska. By A. H. Meyer, E. H. Smies, and T. M. Bushnell, of the U. S. Department of Agriculture, and R. R. Spafford, R. R. Burn, and R. J. Scarborough, of the Nebraska Soil Survey. Pp. 52, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Reconnaissance Soil Survey of South-Central Texas. By A. E. Kocher and Party. Pp. 117, pls. 5, figs. 4, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of the Cache Valley Area, Utah. By J. W. Nelson and E. C. Eckmann. Pp. 70, pls. 4, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

## BULLETINS.

Corn in the Great Plains Area. Relation of Cultural Methods to Production. By E. C. Chilcott, Agriculturist in Charge, and J. S. Cole and W. W. Burr, Assistants, Office of Dry-Land Agriculture. Pp. 31, figs. 6. Contribution from the Bureau of Plant Industry. June 2, 1915. (Department Bulletin 219.) Price, 5 cents.

This bulletin is intended for all who are interested in the agricultural possibilities of the Great Plains area.

Road Models. Pp. 24, pls. 13, figs. 2. Contribution from the Office of Public Roads. June 7, 1915. (Department Bulletin 220.) Price, 15 cents.

This bulletin contains illustrations and descriptions of the models in miniature of roads, bridges, and culverts and of road machinery exhibited by the Office of Public Roads at expositions and fairs and on railroads. Methods of construction are discussed.

The Southern Corn Leaf-Beetle. By E. O. G. Kelly, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 11, pls. 2, figs. 6. Contribution from the Bureau of Entomology. (Professional Paper.) June 16, 1915. (Department Bulletin 221.) Price, 5 cents.

This bulletin is of especial interest to entomologists in the southern half of the United States.

Botanical Characters of the Leaves of the Date Palm Used in Distinguishing Cultivated Varieties. By Silas C. Mason, Arboriculturist, Crop Physiology and Breeding Investigations. Pp. 28, pls. 5, figs. 15. Contribution from the Bureau of Plant Industry. (Professional Paper.) June 23, 1915. (Department Bulletin 223.) Price, 10 cents.

This bulletin is of interest to date growers, especially in the Southwestern States.

The Production of Lumber in 1913. By the Office of Industrial Investigations. Pp. 32, figs. 2. Contribution from the Forest Service. (Professional Paper.) June 26, 1915. (Department Bulletin 232.) Price, 5 cents.

Of interest to lumbermen and manufacturers of wood products.

Control of Dried-Fruit Insects in California. By William B. Parker, Entomological Assistant, Truck Crop and Stored Product Insect Investigations. Pp. 15, pls. 7, figs. 4. Contributions from the Bureau of Entomology. June 24, 1915. (Department Bulletin 235.) Price, 10 cents.

Of interest to growers and packers of fruits, especially in California.

The Eggplant Lace-Bug. By David E. Fink, Entomological Assistant, Truck Crop and Stored Product Insect Investigations. (In cooperation with the Virginia truck experiment station, Norfolk, Va.) Pp. 7, pls. 6. Contribution from the Bureau of Entomology. (Professional Paper.) June 24, 1915. (Department Bulletin 239.) Price, 10 cents.

This bulletin deals with a new enemy of eggplant and related plants. It will be of interest wherever these plants are grown commercially.

Studies on Fruit Juices. By H. C. Gore, Chemist in Charge, Fruit and Vegetable Utilization Laboratory. Pp. 19. Contribution from the Bureau of Chemistry. June 14, 1915. (Department Bulletin 241.) Price, 5 cents.

This bulletin will be of interest only to those concerned with the commercial manufacture of fruit juices. The methods given call for cold storage, sterilization in carbon dioxide, and other processes not commonly available to the housewife.

**Corn, Milo and Kafir, in the Southern Great Plains Area: Relation of Cultural Methods to Production.** By E. F. Chilcott, W. D. Griggs, and C. A. Burmeister, Assistants, Office of Dry-Land Agriculture. Pp. 20. Contribution from the Bureau of Plant Industry. June 19, 1915. (Department Bulletin 242.) Price, 5 cents.

This bulletin is intended for all who are interested in the agricultural possibilities of the southern Great Plains area.

**The Effect of Different Times of Plowing Small-Grain Stubble in Eastern Colorado.** By O. J. Grace, Assistant, Dry-Land Agriculture Investigations. Pp. 15, fig. 1. Contribution from the Bureau of Plant Industry. June 29, 1915. (Department Bulletin 253.) Price, 5 cents.

Of interest to all farmers in the Great Plains area.

**The Sharp-Headed Grain Leafhopper.** By Edmund H. Gibson, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 16, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) June 29, 1915. (Department Bulletin 254.) Price, 5 cents.

This paper is of interest to entomologists throughout the United States.

**The Violet Rove-Beetle.** By F. H. Chittenden, Sc. D., In Charge of Truck Crop and Stored Product Insect Investigations. Pp. 4, fig. 1. Contribution from the Bureau of Entomology. June 15, 1915. (Department Bulletin 264.) Price, 5 cents.

Of especial interest to florists.

**Contents and Index to Technical Series No. 23, Bureau of Entomology.** Pp. i-vi, 53-57. June 22, 1915. Price, 5 cents.

**A Report on the Work and Expenditures of the Agricultural Experiment Stations, during the Fiscal Year Ended June 30, 1913.** Pp. 110, pls. 6. (Office of Experiment Stations.) Price, 10 cents.

**The Work of the Umatilla Reclamation Project Experiment Farm in 1914.** By R. W. Allen, Collaborator. Pp. 18, figs. 3. June 18, 1915. (Bureau of Plant Industry.) Price, 5 cents.

#### FARMERS' BULLETINS.

**Drug Plants under Cultivation.** By W. W. Stockberger, Physiologist in Charge of Drug-Plant and Poisonous-Plant Investigations. Pp. 39, figs. 8. Contribution from the Bureau of Plant Industry. June 5, 1915. (Farmers' Bulletin 663.)

Suitable for general distribution.

**Field Mice as Farm and Orchard Pests.** By D. E. Lantz, Assistant Biologist. Pp. 10, figs. 10. Contribution from the Bureau of Biological Survey. June 3, 1915. (Farmers' Bulletin 670.)

This bulletin describes the habits, geographic distribution, and methods of destroying meadow mice and pine mice, and discusses the value of protecting their natural enemies among mammals, birds, and reptiles. It is for general distribution.

**Irrigation Practice in Rice Growing.** By C. G. Haskell, Irrigation Engineer. Pp. 12, fig. 1. Contribution from the Office of Experiment Stations. June 23, 1915. (Farmers' Bulletin 673.)

This bulletin will be of interest to farmers growing rice under irrigation.

**Hard Clover Seed and Its Treatment in Hulling.** By George T. Harrington, Scientific Assistant, Seed Laboratory. Pp. 8. Contribution from the Bureau of Plant Industry. June 24, 1915. (Farmers' Bulletin 676.)

The facts brought out in this bulletin are of special interest to farmers who grow clover for the seed, to farmers who sow clover seed, to seedsmen, and to the manufacturers and operators of clover-hulling machinery.

**Growing Hay in the South for Market.** By C. V. Piper, Agrostologist in Charge of Forage-Crop Investigations, H. B. McClure, Scientific Assistant, Farm-Management Investigations, and Lyman Carrier, Agronomist, Forage-Crop Investigations. Pp. 22, figs. 10. Contribution from the Bureau of Plant Industry. June 16, 1915. (Farmers' Bulletin 677.)

This bulletin is designed to furnish information on the subject of hay growing to those farmers in the South who are contemplating changing from cotton growing to some other money crop.

**Growing Hard Spring Wheat.** By Carleton R. Ball, Agronomist in charge, and J. Allen Clark, Scientific Assistant, Western Wheat Investigations, Office of Cereal Investigations. Pp. 16, figs. 4. Contribution from the Bureau of Plant Industry. June 10, 1915. (Farmers' Bulletin 678.)

This bulletin discusses the topographic, soil, and climatic features of the northern Great Plains, with special reference to the production of hard spring wheat in that area. Cultural methods for growing the crop are given.

#### SEPARATES.

**The National Forests and The Farmer.** By Henry S. Graves, Forester. Pp. 65-88, pls. 6. (Separate 633, Yearbook 1914.) Price, 5 cents.

**Clean Water and How to Get it on the Farm.** By Robert W. Trullinger, Specialist in Rural Engineering, Office of Experiment Stations. Pp. 139-156. pls. 3. figs. 4. (Separate 634, Yearbook, 1914.) Price, 10 cents.

**Retail Public Markets.** By G. V. Branch, Investigator in City Marketing, Office of Markets and Rural Organization. Pp. 167-184. pls. 4. (Separate 636, Yearbook, 1914.) Price, 5 cents.

**Cooperative Marketing, and Financing of Marketing Associations.** By C. E. Basset and Clarence W. Moormaw, Specialists in Cooperative Organization, and W. H. Kerr, Investigator in Market Business Practice, Office of Markets and Rural Organization. Pp. 185-210. pls. 1. (Separate 637, Yearbook, 1914.) Price, 5 cents.

**Apple Sirup and Concentrated Cider: New Products for Utilizing Surplus and Cull Apples.** By H. C. Gore, Chemist in Charge, Fruit and Vegetable Utilization Laboratory, Bureau of Chemistry. Pp. 227-244. figs. 2. (Separate 639, Yearbook, 1914.) Price, 5 cents.

**The Economy of Farm Drainage.** By R. D. Marsden, Office Engineer, Drainage Investigations, Office of Experiment Stations. Pp. 245-256. pls. 4. (Separate 640, Yearbook, 1914.) Price, 5 cents.

**Selection of Household Equipment.** By Helen H. Atwater, Assistant in Nutrition, Office of Experiment Stations. Pp. 339-362. pls. 4, fig. 1. (Separate 646, Yearbook, 1914.) Price, 5 cents.

**The Egg and Poultry Demonstration Car Work in Reducing our \$50,000,000 Waste in Eggs.** By M. E. Pennington, H. C. Pierce, and H. L. Sfrader, Bureau of Chemistry. Pp. 363-380. pls. 4. fig. 1. (Separate 647, Yearbook, 1914.) Price, 5 cents.

Hard Wheats Winning Their Way. By Mark Alfred Carleton, Cerealist in Charge of Cereal Investigations, Bureau of Plant Industry. Pp. 391-420. pls. 7. figs. 4. (Separate 649, Yearbook, 1914.) Price, 10 cents.

The Farm Woodlot Problem. By Herbert A. Smith, Editor, Forest Service. Pp. 439-456. pls. 8. (Separate 651, Yearbook, 1914.) Price, 10 cents.

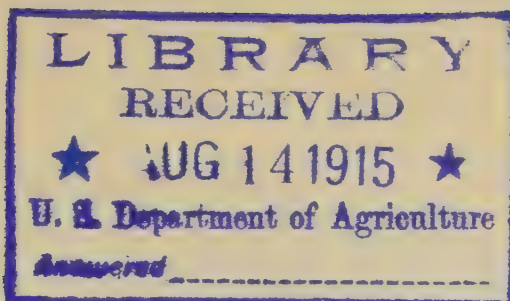
Nematodes and Their Relationships. By N. A. Cobb, Technologist in Charge of Agricultural Technology, Bureau of Plant Industry. Pp. 457-490. figs. 20. (Separate 652, Yearbook, 1914.) Price, 5 cents.

#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

National Weather and Crop Bulletin, Nos. 11, 12, 13, 14, 15, June, 1915, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

JOS. A. ARNOLD,  
*Editor and Chief Division of Publications.*



This circular will be sent regularly to all who apply for it.

## United States Department of Agriculture,

WASHINGTON, D. C., July 31, 1915.

### MONTHLY LIST OF PUBLICATIONS.

[JULY, 1915.]

No publications are sold by the Department of Agriculture; therefore do not send money to this office.

Copies of any of the publications listed herein, except the *Journal of Agricultural Research*, *Experiment Station Record*, and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

When this department's supply is exhausted, publications can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

#### REPORTS.

Report of the Alaska Agricultural Experiment Stations. 1914. Pp. 96, pls. 12. July 22, 1915. Price, 20 cents.

Report of the Porto Rico Agricultural Experiment Station, 1914. Pp. 35, pls. 3. July 10, 1915. Price, 10 cents.

#### SERIALS.

*Journal of Agricultural Research*. Vol. 4, No. 4. July, 1915.

*Contents:* Rheosporangium Aphanidermatus, a New Genus and Species of Fungus Parasitic on Sugar-Beets and Radishes. By H. A. Edson.—Heredity of Color in Phlox Drummondii. By Arthur W. Gilbert.—Asparagus-Beetle Egg Parasite. By F. A. Johnston.—Inheritance of Certain Characters of Grapes. By U. P. Hedrick and R. D. Anthony.—Ascochyta Clematidina, the Cause of Stem-Rot and Leaf-Spot of Clematis. By W. O. Gloyer.—Methods of Bacterial Analysis of Air. By G. L. A. Ruehle.—Wallrothiella Arceuthobii. By James R. Weir. Pp. 279-378, pls. 16, figs. 2. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

*Experiment Station Record*, Vol. XXXII, No. 9. Abstract number. July 10, 1915. E. W. Allen, Ph. D.; Editor. Pp. 801-900. Price, 15 cents.

*Same*, Vol. XXXIII, No. 1. July, 1915. Pp. 1-100. Price, 15 cents.

NOTE.—The *Record* is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at \$1 a volume.

*The Monthly Crop Report*. Vol. 1, No. 3, July 15, 1915. Pp. 12. (Bureau of Crop Estimates.)

The *Monthly Crop Report* is a resumption, in size and nature of material, of the *Crop Reporter*, which was discontinued with the issue of June 19, 1914. It contains data relating to agriculture, including estimates of acreage, condition, yield, prices and value of crops and live stock. The publication of the *Agricultural Outlook*, which formerly contained this matter, was discontinued with the issue of April, 1915.

## SOIL SURVEYS.

- Soil Survey of Bullock County, Alabama. By Howard C. Smith, of the U. S. Department of Agriculture and W. E. Wilkinson, of the Alabama Department of Agriculture and Industries. Pp. 50, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.
- Soil Survey of the Fort Lauderdale Area, Florida. By Mark Baldwin, H. W. Hawker, and Carl F. Miller. Pp. 52, pls. 9, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.
- Soil Survey of the Indian River Area, Florida. By Charles G. Mooney and Mark Baldwin. Pp. 47, pl. 1, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.
- Soil Survey of Wilkinson County, Mississippi. By W. E. Tharp, of the U. S. Department of Agriculture, and W. M. Spann, of the Mississippi Geological Survey. Pp. 52, pl. 1, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.
- Soil Survey of Jackson County, Tennessee. By R. F. Rogers, of the U. S. Department of Agriculture, and J. H. Darden, of the Tennessee Geological Survey. Pp. 29, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

## BULLETINS.

- Grades for Commercial Corn. By J. W. T. Duvel, Crop Technologist in Charge of Grain-Standardization Investigations. Pp. 11, pl. 1, figs. 8. Contribution from the Bureau of Plant Industry. July 15, 1915. (Department Bulletin 168.) Price, 5 cents.

Of especial interest to shippers, elevator men, and brokers.

- The Cypress and Juniper Trees of the Rocky Mountain Region. By George B. Sudworth, Dendrologist. Pp. 36, pls. 26, map. 11. Contribution from the Forest Service. (Professional Paper.) July 17, 1915. (Department Bulletin 207.) Price, 25 cents.

This bulletin describes the distinguishing characters, geographic distribution, and forest habits of all known species of cypress and juniper growing within the Rocky Mountain Region.

- The Naval Stores Industry. By A. W. Schorger, Chemist, and H. S. Betts, Engineer, Forest Products Laboratory. Pp. 58, pls. 11, figs. 9. Contribution from the Forest Service. July 28, 1915. (Department Bulletin 229.) Price, 15 cents.

This bulletin is of interest to producers and users of naval stores.

- Oil-Mixed Portland Cement Concrete. By Logan Waller Page, Director, Office of Public Roads. Pp. 26, pls. 6, figs. 7. Contribution from the Office of Public Roads. July 14, 1915. (Department Bulletin 230.) Price, 10 cents.

This bulletin is a revision of Bulletin 46, Office of Public Roads, and is of interest to those using moisture-proof cement concrete.

- Utilization and Management of Lodgepole Pine in the Rocky Mountains. By D. T. Mason, Assistant District Forester, District 1. Pp. 54, pls. 7, fig. 1. Contribution from the Forest Service. (Professional Paper.) July 12, 1915. (Department Bulletin 234.) Price, 15 cents.

Contains information regarding the ownership and supply, character and uses of the wood, methods of lumbering and management of lodgepole stands.

- Sugar Beets: Preventable Losses in Culture. By Harry B. Shaw, Assistant Pathologist, Cotton and Truck Disease and Sugar-plant Investigations. Pp. 21, pls. 8, figs. 5. Contribution from the Bureau of Plant Industry. July 14, 1915. (Department Bulletin 238.) Price, 10 cents.

Of interest to sugar-beet growers generally.

- Pasteurizing Milk in Bottles and Bottling Hot Milk Pasteurized in Bulk. By S. Henry Ayers, Bacteriologist, and W. T. Johnson, jr., Scientific Assistant, Dairy Division. Pp. 27, figs. 10. Contribution from the Bureau of Animal Industry. (Professional Paper.) July 13, 1915. (Department Bulletin 240.) Price, 5 cents.

This paper is of interest to milk dealers, health officials, and all who have to do with the milk supply of cities; it is suitable for distribution in all parts of the country.

- Cone Beetles: Injury to Sugar Pine and Western Yellow Pine. By John M. Miller, Entomological Assistant, Forest Insect Investigations. Pp. 12, pls. 5, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) July 24, 1915. (Department Bulletin 243.) Price, 10 cents.

This bulletin is the result of field observations made in Oregon and California. It is suitable for distribution on the Pacific coast.

- Life History of Shortleaf Pine. By Wilbur R. Mattoon, Forest Examiner. Pp. 46, pls. 10, figs. 12. Contribution from the Forest Service. (Professional Paper.) July 21, 1915. (Department Bulletin 244.) Price, 15 cents.

This bulletin gives in detail the life history of shortleaf pine, known under various names throughout the South, where only it is found in commercial quantities.

- Further Experiments in the Destruction of Fly Larvae in Horse Manure. By F. C. Cook, Physiological Chemist, Bureau of Chemistry, R. H. Hutchison, Scientific Assistant, Bureau of Entomology, and F. M. Scales, Assistant Mycologist, Bureau of Plant Industry. Pp. 22, pl. 1, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) July 20, 1915. (Department Bulletin 245.) Price, 5 cents.

This bulletin reviews some recent experiments whose results point to an economical, practical, and effective way of destroying fly larvae by chemically treating manure. It includes an account of the effects of certain larvicides on the value of manure, as estimated by chemical and bacteriological analyses.

**Vitrified Brick Pavements for Country Roads.** By Vernon M. Peirce, Chief of Construction, and Charles H. Moorefield, Senior Highway Engineer. Pp. 38, pls. 10, figs. 3. Contribution from the Office of Public Roads. July 24, 1915. (Department Bulletin 246.) Price, 10 cents.

This bulletin describes methods of building and estimates the cost and maintenance of brick paving.

**A Disease of Pine Caused by Cronartium Pyriforme.** By George G. Hedgcock, Pathologist, and William H. Long, Forest Pathologist, Investigations in Forest Pathology. Pp. 20, pls. 2, fig. 1. Contribution from the Bureau of Plant Industry. (Professional Paper.) July 20, 1915. (Department Bulletin 247.) Price, 5 cents.

This bulletin discusses an important disease of pines which is now for the first time fully described. It is intended for circulation among botanists, foresters, nurserymen, State inspectors, and horticulturists.

**Portland Cement Concrete Pavements for Country Roads.** By Charles H. Moorefield and James T. Voshell, Senior Highway Engineers. Pp. 34, pls. 11. Contribution from the Office of Public Roads. July 26, 1915. (Department Bulletin 249.) Price, 15 cents.

This bulletin contains reliable information on the construction of Portland cement concrete pavements for country roads. Practical instructions for highway engineers and all others interested in road making are given.

**Food Plants of the Gipsy Moth in America.** By F. H. Mosher, Entomological Assistant, Gipsy Moth and Brown-Tail Moth Investigations. Pp. 39, pls. 6. Contribution from the Bureau of Entomology. (Professional Paper.) July 24, 1915. (Department Bulletin 250.) Price, 10 cents.

This bulletin reports a series of investigations conducted in 1912, 1913, and 1914 to determine the favored food plants of the gipsy moth. The subject is of interest to entomologists and to State authorities engaged in the fight against the gipsy moth in the northeastern States.

**The Calosoma Beetle (Calosoma Sycophanta) in New England.** By A. F. Burgess, In Charge of Gipsy Moth and Brown-tail Moth Investigations, and C. W. Collins, Entomological Assistant. Pp. 40, pls. 7, map. Contribution from the Bureau of Entomology. (Professional Paper.) July 27, 1915. (Department Bulletin 251.) Price, 15 cents.

A technical description of an enemy of the gipsy moth and a report on the results of its introduction into the district ravaged by this insect.

**Douglas Fir Pitch Moth.** By Josef Brunner, Entomological Assistant, Forest Insect Investigations. Pp. 23, figs. 9. Contribution from the Bureau of Entomology. (Professional Paper.) July 22, 1915. (Department Bulletin 255.) Price, 5 cents.

This bulletin is of interest to entomologists as a contribution to their specialty and to owners and manufacturers as a business proposition.

**Katyids Injurious to Oranges in California.** By J. R. Horton and C. E. Pemberton, Scientific Assistants, Tropical and Subtropical Fruit Insect Investigations. Pp. 24, pls. 5, figs. 16. Contribution from the Bureau of Entomology. (Professional Paper.) July 27, 1915. (Department Bulletin 256.) Price, 10 cents.

Technical descriptions of two katyids causing serious damage to oranges in California are contained in this bulletin. Remedies and methods of control are discussed.

**Progress Reports of Experiments in Dust Prevention and Road Preservation, 1914.** Pp. 44. Contribution from the Office of Public Roads. (Professional Paper.) July 12, 1915. (Department Bulletin 257.) Price, 5 cents.

This bulletin reports the results from a number of experiments in dust prevention and road preservation conducted by the Office of Public Roads in 1914. The materials used and methods employed in the experiments, the several kinds of roads and varying conditions of traffic, and analyses of materials and cost data are given.

**Lessons in Elementary Agriculture for Alabama Schools Outlined by Months.** By E. A. Miller, Specialist in Agricultural Education. Pp. 36. Contribution from the Office of Experiment Stations. July 13, 1915. (Department Bulletin 258.) Price, 5 cents.

This bulletin is prepared especially for the use of rural school-teachers in Alabama.

**Studies on Changes in the Degree of Oxidation of Arsenic in Arsenical Dipping Baths.** By Robert M. Chapin, Senior Biochemist, Biochemic Division. Pp. 12, figs. 2. Contribution from the Bureau of Animal Industry. (Professional Paper.) July 13, 1915. (Department Bulletin 259.) Price, 5 cents.

This bulletin will be of interest to cattle raisers who employ arsenical dipping baths in eradicating the Texas-fever ticks.

**American Plum Borer.** By E. B. Blakeslee, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 31, pls. 3, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) July 19, 1915. (Department Bulletin 261.) Price, 5 cents.

This bulletin gives the life history, habits description of this insect, and methods of combating it.

**The Parandra Borer as an Orchard Enemy.** By Fred E. Brooks, Entomological Assistant, Deciduous-Fruit Insect Investigations. Pp. 7, pls. 4. Contribution from the Bureau of Entomology. July 19, 1915. (Department Bulletin 262.) Price, 5 cents.

This bulletin describes the Parandra borer as an enemy of fruit trees, gives its history and distribution, and suggests methods of combating it. It will be of interest throughout the greater portion of the United States.

**The Cranberry Rootworm.** By H. B. Scammel, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 8, pls. 2. Contribution from the Bureau of Entomology. (Professional Paper.) July 19, 1915. (Department Bulletin 263.) Price, 5 cents.

This bulletin describes the life history and habits of the cranberry rootworm and recommends measures for its control.

**Crop Production in the Great Plains Area. Relation of Cultural Methods to Yields.** By E. C. Chilcott, Agriculturist in Charge, and J. S. Cole and W. W. Burr, Assistants, Office of Dry-Land Agriculture. Pp. 28, fig. 1. Contribution from the Bureau of Plant Industry. July 20, 1915. (Department Bulletin 268.) Price, 5 cents.

This bulletin is intended for all who are interested in the agricultural possibilities of the Great Plains area.

**Cereal Experiments at the Williston Station.** By F. Ray Babcock, Scientific Assistant, Office of Cereal Investigations. Pp. 36, figs. 11. Contribution from the Bureau of Plant Industry. July 29, 1915. (Department Bulletin 270.) Price, 10 cents.

This bulletin presents the results of varietal tests with cereals which have been conducted at Williston, N. Dak., Agricultural Experiment Station. The subject is of interest to experimenters throughout the Great Plains area, and especially in western North Dakota and eastern Montana.

**Factors Governing the Successful Shipment of Red Raspberries from the Puyallup Valley.** By H. J. Ramsey, Pomologist in Charge of Fruit-Handling and Storage Investigations, Office of Horticultural and Pomological Investigations. Pp. 37, figs. 26. Contribution from the Bureau of Plant Industry. July 8, 1915. (Department Bulletin 274.) Price, 10 cents.

This bulletin is of interest to growers and shippers of berries generally, and especially to shippers of red raspberries, who are required to meet special problems.

**Diversified Agriculture and the Relation of the Banker to the Farmer.** By Bradford Knapp, In Charge of Farmers' Cooperative Demonstration Work in the Southern States. Pp. 15. July 2, 1915. (Circular 50, Office of the Secretary.) Price, 5 cents.

**The Hessian Fly Situation in 1915.** By F. M. Webster, In Charge of Cereal and Forage Insect Investigations, and E. O. G. Kelly, Entomological Assistant, Bureau of Entomology. Pp. 10, figs. 5. July 2, 1915. (Circular 51, Office of the Secretary.) Price, 5 cents.

**The Work of the Huntley Reclamation Project Experiment Farm in 1914.** By Dan Hansen, Farm Superintendent. Pp. 23, figs. 8. (Bureau of Plant Industry.) July 10, 1915. Price, 5 cents.

**The Work of the Truckee-Carson Reclamation Project Experiment Farm in 1914.** By F. B. Headley, Farm Superintendent. Pp. 12, fig. 1. Bureau of Plant Industry. July 28, 1915. Price, 5 cents.

This publication is intended for distribution among settlers on and others interested in this project.

#### FARMERS' BULLETINS.

**Control of the Citrus Thrips in California and Arizona.** By J. R. Horton, Scientific Assistant, Tropical and Subtropical Fruit Insect Investigations. Pp. 15, figs. 7. Contribution from the Bureau of Entomology. July 8, 1915. (Farmers' Bulletin 674.)

This bulletin is of interest to the citrus growers of the Pacific coast and the Southwest.

**The Roundheaded Apple-Tree Borer.** By Fred E. Brooks, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 20, figs. 19. Contribution from the Bureau of Entomology. July 6, 1915. (Farmers' Bulletin 675.)

This bulletin describes an insect which in the larval or grub stage is most destructive to apple orchards in the eastern half of the United States. Methods for its control are given.

**House Flies.** By L. O. Howard, Chief of the Bureau of Entomology, and R. H. Hutchison, Scientific Assistant. Pp. 22, figs. 15. Contribution from the Bureau of Entomology. July 14, 1915. (Farmers' Bulletin 679.)

This bulletin supersedes Farmers' Bulletin No. 459. It will be of interest wherever breeding places for flies are found.

**The Silverfish: An Injurious Household Insect.** By C. L. Marlatt, Entomologist. Pp. 4, figs. 2. Contribution from the Bureau of Entomology. July 14, 1915. (Farmers' Bulletin 681.)

This bulletin is of special interest to housekeepers throughout the United States. It is a revision of Circular No. 49 of the Bureau of Entomology, U. S. Department of Agriculture.

**A Simple Trap Nest for Poultry.** By Alfred R. Lee, Animal Husbandman in Poultry Investigations. Pp. 3, figs. 2. Contribution from the Bureau of Animal Industry. July 9, 1915. (Farmers' Bulletin 682.)

This manuscript gives full directions for making a trap nest. It will be of interest to poultry raisers generally.

#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**National Weather and Crop Bulletin, Nos. 16, 17, 18, 19, July, 1915,** reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

JOS. A. ARNOLD,  
*Editor and Chief Division of Publications.*

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# United States Department of Agriculture,

WASHINGTON, D. C., Aug. 31, 1915.

## MONTHLY LIST OF PUBLICATIONS.

[AUGUST, 1915.]

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### SERIALS.

Journal of Agricultural Research. Vol. 4, No. 5. August, 1915.

*Contents:* Tensile Strength and Elasticity of Wool. By Robert F. Miller and William D. Tallman.—Influence of Hybridization and Cross-Pollination on Water Requirement of Plants. By Lyman J. Briggs and H. L. Shantz.—Further Studies of the Embryology of Toxoptera Graminum. By W. J. Phillips.—Prickly-Pears as a Feed for Dairy Cows. By T. E. Woodward, W. F. Turner, and David Griffiths.—A Nasturtium Wilt Caused by Bacterium Solanacearum. By Mark K. Bryan.—Phosphorus Metabolism of Lambs Fed a Ration of Alfalfa Hay, Corn, and Linseed Meal. By E. L. Ross, M. H. Keith, and H. S. Grindley.—A Bacterial Disease of Lettuce. By Nellie A. Brown. Pp. 379-478, pls. 5, figs. 5. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

Experiment Station Record, Vol. XXXIII, No. 2. August, 1915. E. W. Allen, Ph. D., Editor. Pp. 101-200. Price, 15 cents.

*Same*, Vol. XXXII, Index Number. Pp. 901-1000. Aug. 31, 1915. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 1, No. 4, August 17, 1915. Pp. 29-40. (Bureau of Crop Estimates.)

The monthly Crop Report contains data relating to agriculture, including estimates of acreage, condition, yield, prices and value of crops and live stock.

### SERVICE AND REGULATORY ANNOUNCEMENTS.

These contain *only* information, instructions, and notices governing the enforcement of the pure food and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at 5 cents per copy.

Bureau of Animal Industry. No. 98. June, 1915. Pp. 63-82. Aug. 5, 1915. Price, 5 cents.

Bureau of Animal Industry. No. 99. July, 1915. Pp. 83-92. Aug. 21, 1915. Price, 5 cents.

Bureau of Chemistry. No. 14. Pp. 9-20. Aug. 18, 1915. Price, 5 cents.

Bureau of Chemistry, Supplement No. 7. Pp. 363-415. Aug. 5, 1915. Price, 5 cents.

Bureau of Chemistry, Supplement No. 8. Pp. 417-493. Aug. 13, 1915. Price, 10 cents.

Insecticide and Fungicide Board. No. 10. Pp. 31-51. Aug. 31, 1915. Price, 5 cents.

Federal Horticultural Board. July, 1915. No. 18. Pp. 51-54. Aug. 21, 1915. Price, 5 cents.

Office of Markets and Rural Organization. No. 5. Pp. 51-80. Aug. 11, 1915. Price, 5 cents.

## SOIL SURVEYS.

Soil Survey of Muskogee County, Oklahoma. By Grove B. Jones, Cornelius Van Duyne, Ewing Scott, and H. W. Hawker. Pp. 43, pls. 2, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

## BULLETINS.

Testing Grape Varieties in the Vinifera Regions of the United States. By George C. Husmann, Pomologist in Charge of Viticultural Investigations. Pp. 157, pls. 10, fig. 1. Contribution from the Bureau of Plant Industry. (Professional Paper.) Aug. 6, 1915. (Department Bulletin 209.) Price, 25 cents.

Of interest to grape growers throughout the United States.

The Toxicity to Fungi of Various Oils and Salts, Particularly Those Used in Wood Preservation. By C. J. Humphrey, Assistant Pathologist, and Ruth M. Fleming, Scientific Assistant, Office of Investigations in Forest Pathology. Pp. 38, pls. 4. Contribution from the Bureau of Plant Industry. (Professional Paper.) Aug. 23, 1915. (Department Bulletin 227.) Price, 10 cents.

This bulletin gives the results of a series of investigations conducted at the Forest Products Laboratory, Madison, Wis., as to the preservative value of various oils and salts and their toxic effect on wood-destroying fungi.

Recent Studies of the Mexican Cotton Boll Weevil. By B. R. Coad, Entomological Assistant, Southern Field Crop Insect Investigations. Pp. 34, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) Aug. 2, 1915. (Department Bulletin 231.) Price, 5 cents.

This bulletin is of interest to entomologists in the cotton belt.

Fleas. By F. C. Bishopp, Entomological Assistant, Southern Field Crop Insect Investigations. Pp. 31, figs. 9. Contribution from Bureau of Entomology. Aug. 14, 1915. (Department Bulletin 248.) Price, 5 cents.

The activities of fleas as carriers of bubonic plague and other diseases, as parasites upon poultry, and as pests to man and other animals are presented in this bulletin. Descriptions, life history, breeding places, hosts, and methods of eradication and control are given.

Life History of the Codling Moth in Maine. By E. H. Siegler and F. L. Simanton, Entomological Assistants, Deciduous Fruit Insect Investigations. Pp. 50, pls. 2, figs. 9. Contribution from the Bureau of Entomology. (Professional Paper.) Aug. 10, 1915. (Department Bulletin 252.) Price, 10 cents.

Of interest to fruit growers in the New England States.

Outlets and Methods of Sale for Shippers of Fruits and Vegetables. By J. W. Fisher, jr., and J. H. Collins, Assistants in Market Surveys, and Wells A. Sherman, Specialist in Market Surveys. Pp. 28. Contribution from the Office of Markets and Rural Organization. Aug. 16, 1915. (Department Bulletin 266.) Price, 5 cents.

This bulletin should be of interest to shippers, dealers, and consumers of fruits and vegetables throughout the United States.

Methods of Wholesale Distribution of Fruits and Vegetables on Large Markets. By J. H. Collins and J. W. Fisher, jr., Scientific Assistants, and Wells A. Sherman, Specialist in Market Service. Pp. 28, fig. 2. Contribution from the Office of Markets and Rural Organization. Aug. 16, 1915. (Department Bulletin 267.) Price, 5 cents.

This bulletin should be of interest to shippers, dealers, and consumers of fruits and vegetables throughout the United States.

Farmers' Institute Work in the United States in 1914, and Notes on Agricultural Extension Work in Foreign Countries. By J. M. Stedman, Farmers' Institute Specialist. Pp. 21. (Contribution from the Office of Experiment Stations. July 31, 1915. (Department Bulletin 269.) Price, 5 cents.

This publication is of interest to farmers' institutes and other agricultural extension workers in the United States and Canada.

Dispersion of Gipsy-Moth Larvæ by the Wind. By C. W. Collins, Entomological Assistant, Gipsy Moth and Brown-tail Moth Investigations. Pp. 23, pls. 6, map. Contribution from the Bureau of Entomology. (Professional Paper.) Aug. 24, 1915. (Department Bulletin 273.) Price, 15 cents.

An extended report on one of the important phases of gipsy-moth control work, conducted under the direction of the Bureau of Entomology, and in cooperation with the various States affected.

Cotton Warehouse Construction. By Robert L. Nixon, Assistant in Cotton Marketing. Pp. 38, figs. 13. Contribution from the Office of Markets and Rural Organization. Aug. 7, 1915. (Department Bulletin 277.) Price, 10 cents.

This bulletin should be of special interest to warehousemen, cotton dealers, and those contemplating the construction of cotton warehouses, and of general interest to all farmers, bankers, and business men of the South.

Single-Stalk Cotton Culture at San Antonio. By Rowland M. Meade, Scientific Assistant, Office of Crop Acclimatization. Pp. 20, pls. 6, figs. 3. Contribution from the Bureau of Plant Industry. Aug. 24, 1915. (Department Bulletin 279.) Price, 10 cents.

This bulletin will be of service generally in acquainting those who are interested in cotton growing with the several advantages to be gained through the application of single-stalk culture as compared with the more common methods. It will be particularly helpful to farmers and experimenters in locations similar to the San Antonio region.

**Correlating Agriculture with the Public School Subjects in the Northern States.** By C. H. Lane, Chief Specialist in Agricultural Education, and F. E. Heald, Assistant in Agricultural Education. Pp. 42, figs. 6. Contribution from the States Relations Service. Aug. 12, 1915. (Department Bulletin 281.) Price, 10 cents.

This bulletin is prepared especially for the use of rural-school teachers in the Northern States.

**A Study of the Soft Resins in Sulphured and Unsulphured Hops in Cold and in Open Storage.** By G. A. Russell, Expert, Drug-Plant and Poisonous-Plant Investigations. Pp. 19, figs. 10. Contribution from the Bureau of Plant Industry. (Professional Paper.) Aug. 11, 1915. (Department Bulletin 282.) Price, 5 cents.

This bulletin presents the results obtained from experiments conducted to determine the extent and character of the changes in the soft resins in hops under varying conditions of curing and storage. The soft resins, or so-called bitter acids, are a principal factor in determining the commercial value of hops.

**Rail Shipments and Distribution of Fresh Tomatoes, 1914.** By Wells A. Sherman, Specialist in Market Surveys, and Paul Froehlich and Houston F. Walker, Scientific Assistants. Pp. 12, figs. 2. Contribution from the Office of Markets and Rural Organization. Aug. 30, 1915. (Department Bulletin 290.) Price, 5 cents.

This bulletin is of general interest to tomato growers, shippers, dealers, transportation companies, and consumers, and to all engaged in the trade in tomatoes and vegetables.

**Peach Supply and Distribution in 1914.** By Wells A. Sherman, Specialist in Market Surveys; Houston F. Walker, Scientific Assistant; L. Herbert Martin, Assistant in Market Surveys. Pp. 15, fig. 1. Contribution from the Office of Markets and Rural Organization. Aug. 31, 1915. (Department Bulletin 298.) Price, 5 cents.

This bulletin is of general interest to peach growers, shippers, dealers, transportation companies, and consumers.

**Biochemical Decomposition of Nitrogenous Substances in Soils.** By W. B. Kelley, Chemist. Pp. 25, fig. 1. Aug. 3, 1915. (Bulletin 39, Hawaii Agricultural Experiment Station.) Price, 5 cents.

**The Soils of the Hawaiian Islands.** By W. P. Kelley, Wm. McGeorge, and Alice R. Thompson. Pp. 35. Aug. 26, 1915. (Bulletin 40, Hawaii Experiment Station.) Price, 5 cents.

**The Work of the Belle Fourche Reclamation Project Experiment Farm in 1914.** By Beyer Aune, Farm Superintendent. Pp. 15, figs. 2. Aug. 28, 1915. (Bureau of Plant Industry.) Price, 5 cents.

**The Work of the San Antonio Experiment Farm in 1914.** By S. H. Hastings, Farm Superintendent. Pp. 15, figs. 6. Aug. 28, 1915. (Bureau of Plant Industry.) Price, 5 cents.

**Directory of Officials and Organizations concerned with the Protection of Birds and Game, 1915.** Pp. 16. Aug. 11, 1915. (Doc. 101, Biological Survey.) Price, 5 cents.

#### SEPARATES.

**Story of the Thermometer and Its Uses in Agriculture.** By Alfred H. Thiessen, Section Director, Weather Bureau. Pp. 157-166, figs. 3. (Separate 635, Yearbook 1914.) Price, 5 cents.

**Cooperative Marketing, and Financing of Marketing Associations.** By C. E. Bassett and Clarence W. Moomaw, Specialists in Cooperative Marketing, and W. H. Kerr, Investigator in Market Business Practice, Office of Markets and Rural Organization. Pp. 185-210. (Separate 637, Yearbook 1914.) Price, 5 cents.

**State Management of Public Roads: Its Development and Trend.** By J. E. Pennybacker, Chief of Road Economics, Office of Public Roads. Pp. 211-226, pls. 2, figs. 3. (Separate 638, Yearbook 1914.) Price, 5 cents.

**Movement from City and Town to Farms.** By George K. Holmes, Bureau of Crop Estimates. Pp. 257-274. (Separate 641, Yearbook 1914.) Price, 5 cents.

**Our Shorebirds and Their Future.** By Wells W. Cooke, Assistant Biologist, Bureau of Biological Survey. Pp. 275-294, pls. 3, figs. 3. (Separate 642, Yearbook 1914.) Price, 5 cents.

**The Preparation of Fertilizer from Municipal Waste.** By J. W. Turrentine, Scientist in Soil Laboratory Investigations, Bureau of Soils. Pp. 295-310. (Separate 643, Yearbook 1914.) Price, 5 cents.

**Suggestions from Australasia to American Sheep Raisers.** By F. M. Marshall, Senior Animal Husbandman, in Sheep and Goat Investigations, Bureau of Animal Industry. Pp. 319-338, pls. 2, fig. 1. (Separate 645, Yearbook 1914.) Price, 5 cents.

**Meat Production in the Argentine, and Its Effect Upon the Industry in the United States.** By A. D. Melvin, Chief of the Bureau of Animal Industry, and George M. Rommel, Chief of the Animal Husbandry Division, Bureau of Animal Industry. Pp. 381-390. (Separate 648, Yearbook 1914.) Price, 5 cents.

**Meat Production in Australia and New Zealand.** By E. C. Joss, Veterinary Inspector, Bureau of Animal Industry. Pp. 421-438, pls. 4. (Separate 650, Yearbook 1914.) Price, 5 cents.

**Edible Snails.** By E. W. Rust, Entomological Inspector, Federal Horticultural Board. Pp. 491-503. (Separate 653, Yearbook 1914.) Price, 5 cents.

**Statistics of Grain Crops, 1914.** Bureau of Crop Estimates. Pp. 511-593. (Separate 654, Yearbook 1914.) Price, 5 cents.

Live Stock, 1914, and Census Data. Pp. 612-650. (Separate 656, Yearbook 1914.) Price, 5 cents.  
 Imports and Exports of Agricultural Products. Bureau of Crop Estimates. Pp. 651-687. (Separate 657, Yearbook 1914.) Price, 5 cents.

#### PUBLICATIONS OF THE WEATHER BUREAU.

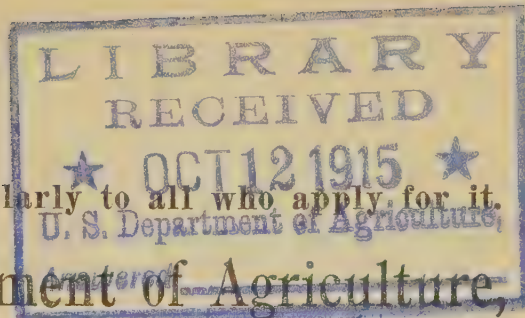
Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

National Weather and Crop Bulletin, Nos. 20, 21, 22, 23, 24, August, 1915, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

JOS. A. ARNOLD,  
*Editor and Chief Division of Publications.*

This circular will be sent regularly to all who apply for it.

## United States Department of Agriculture,



WASHINGTON, D. C., September 30, 1915.

### MONTHLY LIST OF PUBLICATIONS.

[SEPTEMBER, 1915.]

Copies of any of the publications listed herein, except the *Journal of Agricultural Research*, *Experiment Station Record*, and publications of the *Weather Bureau*, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

When this department's supply is exhausted, publications can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

#### SERIALS.

*Journal of Agricultural Research*. Vol. 4, No. 6. September, 1915.

*Contents*: Degree of Resemblance of Parents and Offspring with Respect to Birth as Twins for Registered Shropshire Sheep. By H. L. Rietz and Elmer Roberts.—Soil Protozoa. By George P. Koch.—*Tylenchus Similis*, the Cause of a Root Disease of Sugar Cane and Banana. By N. A. Cobb.—Index and Contents of Volume IV. Pp. 479-579+i-xvi, figs. 2. Price, 25 cents.

NOTE.—THE JOURNAL OF AGRICULTURAL RESEARCH will be distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$2.50 per year, 12 numbers.

*Experiment Station Record*, Vol. XXXIII, No. 3. Abstract Number. E. W. Allen, Ph. D., Editor. Pp. 201-300. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at \$1 a volume.

*The Monthly Crop Report*. Vol. 1, No. 5, September 15, 1915. Pp. 41-52. (Bureau of Crop Estimates.)

The Monthly Crop Report contains data relating to agriculture, including estimates of acreage, condition, yield, prices, and value of crops and live stock.

#### SERVICE AND REGULATORY ANNOUNCEMENTS.

These contain *only* information, instructions, and notices governing the enforcement of the pure food and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at 5 cents per copy.

Bureau of Animal Industry, No. 100. August, 1915. Pp. 93-103. Sept. 27, 1915. Price, 5 cents.

Bureau of Chemistry, Supplement No. 9. Pp. 497-557. Sept. 24, 1915. Price, 5 cents.

## SOIL SURVEYS.

- Soil Reconnaissance in Alaska, With an Estimate of the Agricultural Possibilities. By Hugh H. Bennett and Thomas D. Rice. Pp. 202, pls. 40, maps, 2. (From F. O. Soils, 1914.) Price, 35 cents.
- Soil Survey of Hernando County, Florida. By Grove B. Jones and T. M. Morrison. Pp. 30, pls. 4, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.
- Soil Survey of Terrell County, Georgia. By David D. Long, of the Georgia State College of Agriculture, and Mark Baldwin, of the U. S. Department of Agriculture. Pp. 62, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.
- Soil Survey of Rowan County, North Carolina. By R. B. Hardison, of the U. S. Department of Agriculture, and R. C. Journey, of the North Carolina Department of Agriculture. Pp. 47, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.
- Soil Survey of Paulding County, Ohio. By H. G. Lewis, of the U. S. Department of Agriculture, and Carl W. Shiffler, of the Ohio Agricultural Experiment Station. Pp. 29, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.

## BULLETINS.

- Dates of Egypt and the Sudan. By S. C. Mason, Arboriculturist, Crop Physiology and Breeding Investigations. Pp. 40, pls. 16, figs. 9. Contribution from the Bureau of Plant Industry. (Professional Paper.) Sept. 28, 1915. (Department Bulletin 271.) Price, 20 cents.

A description of date culture and varieties grown in Egypt.

- The Southern Cypress. By Wilbur R. Mattoon, Forest Examiner. Pp. 74, pls. 11, figs. 7. Contribution from the Forest Service. Sept. 27, 1915. (Department Bulletin 272.) Price, 20 cents.

Describes range, supply, methods of lumbering, and markets and prices of cypress.

- The Pea Aphis With Relation to Forage Crops. By J. J. Davis, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 67, figs. 16. Contribution from the Bureau of Entomology. (Professional Paper.) Sept. 29, 1915. (Department Bulletin 276.) Price, 15 cents.

A technical publication of interest to entomologists, *and not suitable for general distribution.*

- Food Habits of the Thrushes of the United States. By F. E. L. Beal, Assistant Biologist. Pp. 23, figs. 2. Contribution from the Bureau of Biological Survey. (Professional Paper.) Sept. 27, 1915. (Department Bulletin 280.) Price, 5 cents.

Treats of the economic relations and value to agriculture of the thrushes of the United States other than robins and bluebirds.

- The Production of Sulphuric Acid and a Proposed New Method of Manufacture. By William H. Waggaman, Scientist in Fertilizer Investigations. Pp. 39, fig. 1. Contribution from the Bureau of Soils. (Professional Paper.) Sept. 28, 1915. (Department Bulletin 283.) Price, 10 cents.

Technical in character and *not for miscellaneous distribution.*

- Construction and Maintenance of Roads and Bridges from July 1, 1913, to Dec. 31, 1914. Pp. 64. Contribution from the Office of Public Roads and Rural Engineering. Sept. 17, 1915. (Department Bulletin 284.) Price, 10 cents.

Contains reports on work done on roads and bridges in various parts of the United States, and is of interest to contractors, engineers, and road officials only.

- Strength Test of Structural Timbers Treated by Commercial Wood-Preserving Processes. By H. S. Betts and J. A. Newlin, Engineers in Forest Products, Forest Products Laboratory. Pp. 15, figs. 7. Contribution from the Forest Service. (Professional Paper.) Sept. 27, 1915. (Department Bulletin 286.) Price, 5 cents.

Of interest to users of timber where strength is an important consideration.

- A Device for Sampling Grain, Seeds, and Other Material. By E. G. Boerner, Assistant in Grain Standardization. Pp. 4, figs. 5. Contribution from the Bureau of Plant Industry. (Professional Paper.) Sept. 14, 1915. (Department Bulletin 287.) Price, 5 cents.

Of interest to all who have occasion to get samples of grain and seeds.

Custom Ginning as a Factor in Cotton-Seed Deterioration. By D. A. Saunders, Plant Breeder, and P. V. Cardon, Assistant Agronomist, Office of Crop Acclimatization. Pp. 8, figs. 5. Contribution from the Bureau of Plant Industry. Sept. 7, 1915. (Department Bulletin 288.) Price, 5 cents.

Should be of service to all who are interested in the production and maintenance of pure cotton seed.

Red-Clover Seed Production: Pollination Studies. By J. M. Westgate and H. S. Coe, Office of Forage Crop Investigations; A. T. Wiancko and F. E. Robbins, of the Indiana Agricultural Experiment Station; and H. D. Hughes, L. H. Pammel, and J. N. Martin, of the Iowa Agricultural Experiment Station. Pp. 31, figs. 7. Contribution from the Bureau of Plant Industry. (Professional Paper.) Sept. 21, 1915. (Department Bulletin 289.) Price, 5 cents.

Of special interest to those engaged in the production of clover seed for commercial purposes.

Apple Market Investigations, 1914-15. By Clarence W. Moomaw, Specialist in Cooperative Organization, and M. M. Stewart, Assistant in Market Grades and Standards. Pp. 23, pl. 1, charts 12. Contribution from the Office of Markets and Rural Organization. Sept. 15, 1915. (Department Bulletin 302.) Price, 10 cents.

Of general interest to apple growers, shippers, dealers, transportation companies, and consumers, and to all engaged in the trade in apples and fruits.

A Review of the American Moles. By Hartley H. T. Jackson, Assistant Biologist, Biological Survey. Pp. 100, pls. 6, figs. 27. Sept. 30, 1915. (North American Fauna, No. 38.) Price, 20 cents.

Technical in character and not for miscellaneous distribution.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction, Bureau of Plant Industry, During the Period from Jan. 1 to Mar. 31, 1913. Pp. 51, pls. 6. (Inventory No. 34; Nos. 34728 to 35135.) Price, 10 cents.

The department's supply of this publication is exhausted.

#### FARMERS' BULLETINS.

Squab Raising. By Alfred R. Lee, Animal Husbandman in Poultry Investigations, Animal Husbandry Division. Pp. 16, figs. 9. Contribution from the Bureau of Animal Industry. Sept. 13, 1915. (Farmers' Bulletin 684.)

Discusses the general management of pigeons for the production of squabs, and also contains a summary of data secured from pigeon breeders throughout the United States. It will be of interest to anyone considering the production of squabs for market.

Uses of Sorghum Grain. By Carleton R. Ball, Agronomist in Charge, and Benton E. Rothgeb, Scientific Assistant, Grain-Sorghum and Broom-Corn Investigations. Pp. 15, figs. 12. Contribution from the Bureau of Plant Industry. Sept. 22, 1915. (Farmers' Bulletin 686.)

Suitable for distribution in the southern part of the Great Plains area.

Eradication of Ferns from Pasture Lands in the Eastern United States. By H. R. Cox, Agriculturist, Office of Farm Management. Pp. 12, figs. 8. Contribution from the Bureau of Plant Industry. Sept. 18, 1915. (Farmers' Bulletin 687.)

Of interest to farmers in the hill country of the Northeastern States and the higher portions of the Appalachian Mountain region farther south.

The Culture of Rice in California. By Charles E. Chambliss, Agronomist in Charge of Rice Investigations, and E. L. Adams, Assistant Agronomist, Office of Cereal Investigations. Pp. 20, figs. 7. Contribution from the Bureau of Plant Industry. Sept. 18, 1915. (Farmers' Bulletin 688.)

Of interest to the rice growers of California.

A Plan for a Small Dairy House. By Ernest Kelly, Dairyman, and Karl E. Parks, Dairy Engineer, Dairy Division. Pp. 4, figs. 4. Contribution from the Bureau of Animal Industry. Sept. 10, 1915. (Farmers' Bulletin 689.)

Suitable for general distribution among farmers and dairymen.

Game Laws for 1915. A Summary of the Provisions Relating to Seasons, Export, Sale, Limits, and Licenses, for the United States and Canada. By T. S. Palmer, W. F. Bancroft, and Frank L. Earnshaw. Pp. 64, figs. 4. Contribution from the Bureau of Biological Survey. Sept. 15, 1915. (Farmers' Bulletin 692.)

For general distribution.

#### SEPARATES.

Statistics of Crops Other Than Grain Crops, 1914. Pp. 557-612. (Separate 655, Yearbook 1914.) Price, 5 cents.

#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

National Weather and Crop Bulletin, Nos. 25, 26, 27, 28, September, 1915, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

JOS. A. ARNOLD,  
*Editor and Chief Division of Publications.*

This circular will be sent regularly to all who apply for it.

# United States Department of Agriculture,

WASHINGTON, D. C., October 30, 1915.

## MONTHLY LIST OF PUBLICATIONS.

[OCTOBER, 1915.]

### HOW TO SECURE PUBLICATIONS.

A copy of any of the publications listed herein, including those with price named, except the *Journal of Agricultural Research*, *Experiment Station Record*, and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

Instead of writing a letter, applicants may return this list with an "X" plainly marked on the left-hand margin opposite the publication desired, and with name and address plainly written at top or end of list.

After this department's supply of the publications listed below is exhausted, these publications of which the price is indicated can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

### SERIALS.

*Journal of Agricultural Research*. (Issued weekly.)

Vol. 5, No. 1. October 4, 1915. *Contents*: Announcement of Weekly Publication. By D. F. Houston.—Effect of Alkali Salts in Soils on the Germination and Growth of Crops. By Frank S. Harris.—Histological Relations of Sugar-Beet Seedlings and *Phomabetae*. By H. A. Edson. Pp. 1–58, pls. 2, figs. 48. Price, 10 cents.

*Same*, No. 2. October 11, 1915. *Contents*: Perennial Mycelium in Species of *Peronosporaceae* Related to *Phytophthora infestans*. By I. E. Melhus.—Hibernation of *Phytophthora infestans* of the Irish Potato. By I. E. Melhus. Pp. 59–102, pls. III–VIII, figs. 4. Price, 15 cents.

*Same*, No. 3. October 18, 1915. *Contents*: Enzymes of Apples and Their Relation to the Ripening Process. By R. W. Thatcher.—An Automatic Transpiration Scale of Large Capacity for Use with Freely Exposed Plants. By Lyman J. Briggs and H. L. Shantz.—Parasitism of *Comandra umbellata*. By George Grant Hedgcock.—Separation of Soil Protozoa. By Nicholas Kopeloff, H. Clay Lint, and David A. Coleman. Pp. 103–140, pls. IX–XI, figs. 18. Price, 10 cents.

*Same*, No. 4. October 25, 1915. *Contents*: Effect of Temperature on the Movement of Water Vapor and Capillary Moisture in Soils. By G. J. Bouyoucos.—Soil Temperatures as Influenced by Cultural Methods. By Joseph Oskamp.—*Alternaria papax*, the Cause of a Root-Rot of Ginseng. By J. Rosenbaum and C. L. Zinnsmeister. Pp. 141–182, pls. XII–XIII, figs. 15. Price, 10 cents.

NOTE.—Beginning with Volume 5, THE JOURNAL OF AGRICULTURAL RESEARCH will be issued weekly and distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$3.00 per year, 52 numbers.

Experiment Station Record, Vol. XXXIII, No. 4, September, 1915. E. W. Allen, Ph. D., Editor. Pp. 301-400. Price, 15 cents.

*Same*, Vol. XXXIII, No. 5, October, 1915. Pp. 401-500. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 1, No. 6, October 16, 1915. Pp. 53-64. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, condition, yield, prices and value of crops and live stock.

#### SERVICE AND REGULATORY ANNOUNCEMENTS.

These contain *only* information, instructions, and notices governing the enforcement of the pure food and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at 5 cents per copy.

Bureau of Animal Industry. September, 1915. No. 101. Pp. 105-111. Oct. 29, 1915. Price, 5 cents.

Bureau of Chemistry, Supplement No. 10. Pp. 559-656. Oct. 21, 1915. Price, 5 cents.

#### SOIL SURVEYS.

Soil Survey of Jackson County, Georgia. By David D. Long, of the Georgia State College of Agriculture, and Mark Baldwin, of the U. S. Department of Agriculture. Pp. 27, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.

Soil Survey of Bladen County, North Carolina. By R. B. Hardison, Risdin T. Allen, and B. B. Derrick, of the U. S. Department of Agriculture, and L. L. Brinkley, S. O. Perkins, and R. C. Journey, of the North Carolina Department of Agriculture. Pp. 35, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.

Soil Survey of Buffalo County, Wisconsin. By W. J. Geib, Clarence Lounsbury, and L. Cantrell, of the U. S. Department of Agriculture, and T. J. Dunnewald and O. J. Noer, of the Wisconsin Geological and Natural History Survey. Pp. 50, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

#### BULLETINS.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. As long as the department's supply lasts, these bulletins will be supplied free to persons who can use such specialized information. See instructions on page 1.

Miscellaneous Insecticide Investigations. By E. W. Scott and E. H. Siegler, Entomological Assistants, Deciduous-Fruit Insect Investigations. Pp. 47. Contribution from the Bureau of Entomology. (Professional Paper.) Oct. 5, 1915. (Department Bulletin 278.) Price, 10 cents.

Describes experiments with various chemicals, singly and combined, for the destruction of insect pests. It will be of interest to horticulturists in general and apple growers in particular.

The Northern Hardwood Forest: Its Composition, Growth, and Management. By E. H. Frothingham, Forest Examiner. Pp. 80, pls. 15, figs. 1. Contribution from the Forest Service. (Professional Paper.) Oct. 22, 1915. (Department Bulletin 285.) Price, 20 cents.

Of interest to lumbermen in the Upper Mississippi and Great Lakes region and the New England States, and to manufacturers of hardwood products generally.

Distribution and Migration of North American Gulls and Their Allies. By Wells W. Cooke, Assistant Biologist. Pp. 70, figs. 31. Contribution from the Bureau of Biological Survey. (Professional Paper.) Oct. 25, 1915. (Department Bulletin 292.) Price, 15 cents.

Presents precise information regarding the ranges of the several species of gulls and their allies, the skuas and jaegers, especially the breeding ranges and migrations, and includes data for use for legislative reference to serve as a basis for legal protection for the species by States in which they are found. For general distribution.

The Grasshopper Outbreak in New Mexico During the Summer of 1913. By Harrison E. Smith, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 12, figs. 2. Contribution from the Bureau of Entomology. (Professional Paper.) Oct. 7, 1915. (Department Bulletin 293.) Price, 5 cents.

For distribution throughout that part of the country where this insect is found.

Lessons on Cotton for the Rural Common Schools. By C. H. Lane, Chief Specialist in Agricultural Education. Pp. 16, figs. 4. Contribution from the States Relations Service. (Professional Paper.) Sept. 30, 1915. (Department Bulletin 294.) Price, 5 cents.

Furnishes elementary lessons on cotton and is of interest to rural school teachers in the Southern States.

The Zimmerman Pine Moth. By Josef Brunner, Assistant in Forest Entomology, Forest Insect Investigations. Pp. 12, pls. 11. Contribution from the Bureau of Entomology. (Professional Paper.) Oct. 28, 1915. (Department Bulletin 295.) Price, 10 cents.

Of special interest to manufacturers and users of pine lumber from the Western States.

Our Foreign Trade in Farm and Forest Products. Prepared under the direction of Perry Elliott, Division of Crop Records. Pp. 51, figs. 2. Contribution from the Bureau of Crop Estimates. Oct. 25, 1915. (Department Bulletin 296.) Price, 10 cents.

A summary of the leading features of the foreign trade of the United States in farm and forest products. It is intended for general circulation.

Cereal Investigations on the Belle Fourche Experiment Farm. By Cecil Salmon, formerly Plant Physiologist, Office of Cereal Investigations. Pp. 43, figs. 12. Contribution from the Bureau of Plant Industry. Oct. 28, 1915. (Department Bulletin 297.) Price, 10 cents.

Of interest to dry-land and irrigation farmers, especially in South Dakota.

Silver Fox Farming in Eastern North America. By Ned Dearborn, Assistant Biologist. Pp. 35, figs. 22. Contribution from the Bureau of Biological Survey. Oct. 29, 1915. (Department Bulletin 301.) Price, 10 cents.

A discussion of sites, methods of breeding and handling the animals, costs and profits in the business of fox farming.

A Bacteriological Study of Retail Ice Cream. By S. Henry Ayers, Bacteriologist, and William T. Johnson, Jr., Scientific Assistant, Dairy Division. Pp. 24, figs. 3. Contribution from the Bureau of Animal Industry. (Professional Paper.) Oct. 29, 1915. (Department Bulletin 303.) Price, 5 cents.

A technical description of results obtained from a bacteriological examination of samples of ice cream secured from various stores in Washington, D. C.

Some Effects of Selection on the Production of Alkaloids in Belladonna. By A. F. Sievers, Chemical Biologist, Drug-Plant and Poisonous-Plant Investigations. Pp. 20, figs. 10. Contribution from the Bureau of Plant Industry. (Professional Paper.) Oct. 15, 1915. (Department Bulletin 306.) Price, 5 cents.

Technical in character and not suitable for miscellaneous distribution.

Cantaloupe Marketing in the Larger Cities, With Car-Lot Supply, 1914. By Wells A. Sherman, Specialist in Market Surveys, A. Dexter Gail, Jr., Assistant in Market Surveys, and Faith L. Yeaw, Laboratory Aid. Pp. 20, figs. 8. Contribution from the Office of Markets and Rural Organization. Oct. 23, 1915. (Department Bulletin 315.) Price, 5 cents.

Should be of general interest to cantaloupe growers, shippers, dealers, and consumers, and to transportation companies.

#### MISCELLANEOUS.

State Highway Mileage and Expenditures to January 1, 1915. Prepared by the Division of Road Economics, Office of Public Roads and Rural Engineering. Pp. 6. Oct. 13, 1915. (Circular 52, Office of the Secretary.) Price, 5 cents.

Formulæ for Calculating Interest on Farm Equipment. By W. J. Spillman, Chief, Office of Farm Management. Pp. 4. Oct. 12, 1915. (Circular 53, Office of the Secretary.) Price, 5 cents.

- A System of Pasturing Alfalfa in Salt River Valley, Arizona. By R. W. Clothier, Agriculturist, Office of Farm Management. Pp. 4. Oct. 22, 1915. (Circular 54, Office of the Secretary.) Price, 5 cents.
- The Necessity for Eradicating Foot-and-Mouth Disease. Pp. 4. Oct. 5, 1915. (Bureau of Animal Industry.)
- The Work of the Scottsbluff Reclamation Project Experiment Farm in 1914. By Fritz Knorr, Farm Superintendent. Pp. 19, figs. 3. Oct. 9, 1915. (Bureau of Plant Industry.) Price, 5 cents.
- The Work of the Yuma Reclamation Project Experiment Farm in 1914. By R. E. Blair, Farm Superintendent. Pp. 24, figs. 6. Oct. 18, 1915. (Bureau of Plant Industry.)
- List of Farmers' Bulletins Available for Distribution, Nov. 1, 1915. Pp. 3.

#### FARMERS' BULLETINS.

No price is quoted for Farmers' Bulletins for the reason that the department's supply of the current numbers is ordinarily sufficient to make it possible to send them free to all applicants.

- Varieties of Hard Spring Wheat. By Carleton R. Ball, Agronomist in Charge, and J. Allen Clark, Scientific Assistant, Western Wheat Investigations. Pp. 20, figs. 7. Contribution from the Bureau of Plant Industry. Oct. 7, 1915. (Farmers' Bulletin 680.)

Deals with the varieties of hard spring wheat, both common and durum, and shows the particular sections and districts to which they are suited.

- The Native Persimmon. By W. F. Fletcher, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 28, figs. 17. Contribution from the Bureau of Plant Industry. Oct. 12, 1915. (Farmers' Bulletin 685.)

Intended for those to whom knowledge of the production, preparation, and uses of the native persimmon is of value.

- The Field Pea As a Forage Crop. By H. N. Vinall, Agronomist, Office of Forage Crop Investigations. Pp. 24, figs. 16. Contribution from the Bureau of Plant Industry. Oct. 8, 1915. (Farmers' Bulletin 690.)

Of interest to farmers and dairymen. It discusses the field pea principally as a forage crop.

- Bur Clover. By Charles V. Piper, Agrostologist in Charge, and Roland McKee, Assistant Agrostologist, Office of Forage Crop Investigations. Pp. 15, figs. 6. Contribution from the Bureau of Plant Industry. Oct. 15, 1915. (Farmers' Bulletin 693.)

Intended for general distribution in the cotton regions and on the Pacific coast.

- The Cultivation of Peppermint and Spearmint. By Walter Van Fleet, Physiologist, Drug-Plant and Poisonous-Plant Investigations. Pp. 13. Contribution from the Bureau of Plant Industry. Oct. 19, 1915. (Farmers' Bulletin 694.)

Of interest to those engaged in or contemplating mint culture, and is applicable to all portions of the country where mint is grown.

- Outdoor Wintering of Bees. By E. F. Phillips, In Charge of Bee Culture Investigations, and George S. Demuth, Apicultural Assistant. Pp. 12. Contribution from the Bureau of Entomology. Oct. 12, 1915. (Farmers' Bulletin 695.)

Deals with the care of bees in winter when wintered outside, and is of interest to beekeepers in all parts of the United States.

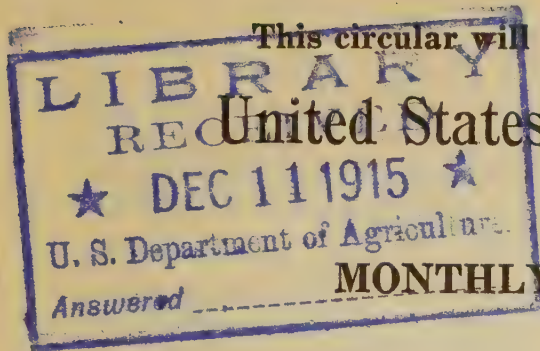
#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

- National Weather and Crop Bulletin, Nos. 29, 30, 31, 32, October, 1915, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

JOS. A. ARNOLD,  
*Editor and Chief Division of Publications.*

This circular will be sent regularly to all who apply for it.



## United States Department of Agriculture,

WASHINGTON, D. C., November 30, 1915.

### MONTHLY LIST OF PUBLICATIONS.

[NOVEMBER, 1915.]

#### HOW TO SECURE PUBLICATIONS.

A copy of any of the publications listed herein, including those with price named, except the *Journal of Agricultural Research*, *Experiment Station Record*, and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

Instead of writing a letter, applicants may return this list with an "X" plainly marked on the left-hand margin opposite the publication desired, and with name and address plainly written at top or end of list.

After this department's supply of the publications listed below is exhausted, these publications of which the price is indicated can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

#### SPECIAL NOTICE.

*An increasing number of requests for publications are being received daily in this division with incomplete addresses. Many correspondents fail to sign their names. Some do not give post-office address. Persons living in large cities fail to furnish the street address; and some give as the post-office address the name of an office that has been discontinued for years. The department is unable to handle correspondence unless the signature is legible and the post-office address given in full, with street number or rural route number, as the case may be. Correspondents are therefore earnestly requested to see that the complete address is given in all communications addressed to this department.*

#### REPORTS.

Field Operations of the Bureau of Soils, 1912. (Fourteenth Report.) By Milton Whitney, Chief. With accompanying papers by assistants in charge of field parties. Pp. 2166, pls. 35, figs. 56, maps 53 (in case). Price, \$6.00.

For distribution also by Senators, Representatives, and Delegates in Congress.

#### SERIALS.

*Journal of Agricultural Research*. (Issued weekly.)

Vol. 5, No. 5. November 1, 1915. Contents: Some Potato Tuber-Rots Caused by Species of *Fusarium*. By C. W. Carpenter.—Infection Experiments with Timothy Rust. By E. C. Stackman and Louise Jensen. Pp. 183–216, pls. A, B, XIV–XIX. Price, 10 cents.

Same, No. 6. November 8, 1915. Contents: Experiments in the use of Current Meters in Irrigation Canals. By S. T. Harding.—Relation of Sulphur Compounds to Plant Nutrition. By E. B. Hart and W. E. Tottingham.—Distribution of the Virus of the Mosaic Disease in Capsules, Filaments, Anthers, and Pistils of Affected Tobacco Plants. By H. A. Allard.—Dissemination of Bacterial Wilt of Cucurbits. By Frederick V. Rand. Pp. 217–260, pls. XX–XXIV. Price, 10 cents.

Journal of Agricultural Research—Continued.

Vol. 5, No. 7, November 15, 1915. Contents: Gossypol, the Toxic Substance in Cottonseed Meal. By W. A. Withers and F. A. Carruth.—Two New Hosts for *Peridermium pyriforme*. By William H. Long.—Pathogenicity and Identity of *Sclerotinia libertiana* and *Sclerotinia smilacina* on Ginseng. By J. Rosenbaum. Ph. 261-298, pls. XXV-XXIX, fig. 1. Price, 10 cents.

*Same*, No. 8. November 22, 1915. Contents: An Improved Respiration Calorimeter for Use in Experiments with Man. By C. F. Langworthy and R. D. Milner.—Occurrence of Manganese in Wheat. By William P. Headden. Pp. 299-355, pls. XXX-XXXVI. Price, 10 cents.

*Same*, No. 9. November 29, 1915. Contents: Ash Composition of Upland Rice at Various Stages of Growth. By P. L. Gile and J. O. Carrero.—Varietal Resistance of Plums to Brown-Rot. By W. D. Valleau.—Frequency of Occurrence of Tumors in the Domestic Fowl. By Maynie R. Curtis. Pp. 357-404, pls. XXXVII-XXXIX. Price, 10 cents.

NOTE.—Beginning with Volume 5, THE JOURNAL OF AGRICULTURAL RESEARCH will be issued weekly and distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$3.00 per year, 52 numbers.

Experiment Station Record, Vol. XXXIII, No. 6, Abstract Number. E. W. Allen, Ph. D., Editor. Pp. 501-600. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 1, No. 7, Nov. 13, 1915. Pp. 65-76. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices and value of crops and live stock.

#### SERVICE AND REGULATORY ANNOUNCEMENTS.

These contain *only* information, instructions, and notices governing the enforcement of the pure food and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at 5 cents per copy.

Bureau of Animal Industry. Oct., 1915. No. 102. Pp. 113-120. Nov. 26, 1915. Price, 5 cents.

Bureau of Chemistry. No. 15. Pp. 21-24. Nov. 4, 1915. Price, 5 cents.

Federal Horticultural Board. No. 20. Sept., 1915. Pp. 59-79. Oct. 30, 1915. Price, 5 cents.

Insecticide and Fungicide Board. No. 11. Pp. 53-89. Nov. 24, 1915. Price, 5 cents.

#### SOIL SURVEYS.

Soil Survey of Bryan County, Oklahoma. By William T. Carter, Jr., and A. L. Patrick. Pp. 52, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.

Soil Survey of Jefferson County, Texas. By William T. Carter, Jr., L. R. Schoenmann, T. M. Bushnell, and E. T. Maxon. Pp. 47, pls. 3, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

Soil Survey of Stevens County, Washington. By Cornelius Van Duyne, of the U. S. Department of Agriculture, and Fred W. Ashton, of the Washington Geological Survey. Pp. 137, pls. 5, figs. 5, map. (From F. O. Soils, 1913.) Price, 25 cents.

## BULLETINS.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. As long as the department's supply lasts, these bulletins will be supplied free to persons who can use such specialized information. See instructions on page 1.

**The Dog as a Carrier of Parasites and Disease.** By Maurice C. Hall, Ph. D., Assistant Zoologist, Zoological Division. Pp. 27, figs. 13. Contribution from the Bureau of Animal Industry. Nov. 23, 1915. (Department Bulletin 260.) Price, 5 cents.

Points out the increasing damage done by the stray and uncared-for dog as a carrier of parasites and disease germs harmful to both man and live stock, and is especially intended for the use of physicians, veterinarians, and health officers.

**Excavating Machinery Used In Land Drainage.** By D. L. Yarnell, Drainage Engineer. Pp. 39, pls. 9. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) Nov. 10, 1915. (Department Bulletin 300.) Price, 15 cents.

Of interest to those who have to do with the installation of systems of drainage; it is suitable for distribution in the eastern part of the United States.

**Land Drainage By Means of Pumps.** By S. M. Woodward, Drainage Engineer. Revised with Special Reference to the Upper Mississippi Valley, by C. W. Okey, Senior Drainage Engineer. Pp. 60, pls. 8, figs. 3. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) Nov. 19, 1915. (Department Bulletin 304.) Price, 15 cents.

Treats in general of the drainage of land which lies so low that it must be protected from overflow by levees and the drainage water pumped out of the protected area owing to lack of gravity outlet. Has special reference to low-lying bottom lands along the larger streams of the upper Mississippi Valley.

**Exercises With Plants and Animals for Southern Rural Schools.** By E. A. Miller, Specialist in Agricultural Education. Pp. 63, pls. 5. Contribution from the States Relations Service. (Professional Paper.) Nov. 11, 1915. (Department Bulletin 305.) Price, 15 cents.

Intended especially for the use of rural school teachers in the Southern States.

**Shortleaf Pine: Its Economic Importance and Forest Management.** By Wilbur R. Mattoon, Forest Examiner. Pp. 67, pls. 10, figs. 4. Contribution from the Forest Service. (Professional Paper.) Nov. 22, 1915. (Department Bulletin 308.) Price, 15 cents.

Is of value to those who are interested in the timber supply of the Eastern and Southern States and in the management of tracts of shortleaf pine for their highest financial returns. It will be helpful to those in the regions covered desiring to restock denuded pine uplands by means of sowing and planting.

**Zacaton as a Paper-Making Material.** By Charles J. Brand, in Charge, and Jason L. Merrill, Assistant Chemist, Paper-Plant Investigations. Pp. 28, figs. 13. Contribution from the Bureau of Plant Industry. (Professional Paper.) Nov. 4, 1915. (Department Bulletin 309.) Price, 5 cents.

Should be useful to all persons who are interested in the economic phases of paper making, especially to print and book-paper manufacturers. It has a botanic and chemical interest as well. Not for general distribution.

**Digestibility of Some Animal Fats.** By C. F. Langworthy, Chief, and A. D. Holmes, Scientific Assistant, Office of Home Economics. Pp. 23. Contribution from the States Relations Service. (Professional Paper.) Nov. 9, 1915. (Department Bulletin 310.) Price, 5 cents.

Record studies of the digestibility and melting point of lard, beef fat, mutton fat, and butter, and is primarily of interest to students and investigators of food problems.

**The Handling and Marketing of the Arizona-Egyptian Cotton of the Salt River Valley.** By J. G. Martin, Investigator in Cotton Marketing. Pp. 16, pls. 3. Contribution from the Office of Markets and Rural Organization. Nov. 26, 1915. (Department Bulletin 311.) Price, 5 cents.

Should be of interest to growers in Arizona and in California, to dealers in Yazoo and Mississippi Delta cotton, to spinners in New England and the Carolinas, and to spinners of fine yarn in England and on the Continent.

**Phosphate Rock and Methods Proposed for Its Utilization As a Fertilizer.** By William H. Waggaman and William H. Fry. Pp. 37. Contribution from the Bureau of Soils. (Professional Paper.) Nov. 5, 1915. (Department Bulletin 312.) Price, 5 cents.

Technical in character and not suitable for miscellaneous distribution.

**Features of the Sheep Industries of United States, New Zealand, and Australia Compared.** By F. R. Marshall, Senior Animal Husbandman in Sheep and Goat Investigations, Animal Husbandry Division. Pp. 35, pls. 8. Contribution from the Bureau of Animal Industry. Nov. 13, 1915. (Department Bulletin 313.) Price, 10 cents.

Of interest to sheep raisers and wool buyers generally.

**The Bonavist, Lablab, or Hyacinth Bean.** By C. V. Piper, Agrostologist in Charge, and W. J. Morse, Scientific Assistant, Forage-Crop Investigations. Pp. 15, pls. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) Nov. 18, 1915. (Department Bulletin 318.) Price, 5 cents.

Gives description, characteristics, food value, and drought resistant qualities of this bean. Especially adapted to the Southern and Southwestern states.

**Honeybees: Wintering, Yields, Imports, and Exports of Honey.** By Samuel A. Jones, Chief, Division of Crop Reports. Pp. 12, Contribution from the Bureau of Crop Estimates. Nov. 26, 1915. (Department Bulletin 325.) Price, 5 cents.

Will be found of interest to beekeepers and dealers in bee products.

#### MISCELLANEOUS.

**Blackleg: Its Nature, Cause, and Prevention.** By Victor A. Nørgaard, V. S. (Copenhagen). Revised by John R. Mohler, V. M. D., Assistant Chief of the Bureau. Pp. 22. Nov. 8, 1915. (Circular 31, Bureau of Animal Industry. Sixth Revision.) Price, 5 cents.

**Revision of the Pocket Gophers of the Genus Thomomys.** By Vernon Bailey. Pp. 136, pls. 8, figs. 10. Nov. 15, 1915. (North American Fauna No. 39.) Price, 25 cents.

Not available for free distribution.

**Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period from April 1 to June 30, 1913.** Pp. 69, pls. 8. Nov. 9, 1915. (Bureau of Plant Industry Inventory No. 35. Nos. 35136 to 35666.) Price, 10 cents.

**Establishing the Swine Industry on the North Platte Reclamation Project.** By Charles S. Jones, Assistant. With an introduction by F. D. Farrell, Agriculturist in Charge. Pp. 26, figs. 5. Nov. 6, 1915. (Bureau of Plant Industry.) Price, 5 cents.

Of interest generally to farmers on all irrigation projects.

**Work of the Office of Markets and Rural Organization.** By Charles J. Brand, Chief. Pp. 16. Revised Edition. Nov. 27, 1915. (Document 1, Markets.)

**Index to Volume 2, Weekly News Letter.** August 12, 1914–August 4, 1915. Pp. 17.

#### FARMERS' BULLETINS.

No price is quoted for Farmers' Bulletins for the reason that the department's supply of the current numbers is ordinarily sufficient to make it possible to send them free to all applicants.

**Fleas as Pests to Man and Animals, With Suggestions for Their Control.** By F. C. Bishopp, Entomological Assistant, Southern Field Crop Insect Investigations. Pp. 15, figs. 6. Contribution from the Bureau of Entomology. Nov. 8, 1915. (Farmers' Bulletin 683.)

For general distribution.

**Handling and Shipping Citrus Fruits in the Gulf States.** By H. J. Ramsey, Pomologist in Charge of Fruit Handling and Storage Investigations. Pp. 28, figs. 10. Contribution from the Bureau of Plant Industry. Nov. 10, 1915. (Farmers' Bulletin 696.)

Of especial interest to citrus fruit growers in all sections.

#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**National Weather and Crop Bulletin, No. 30, October, 1915, reporting temperature, rainfall, and crop conditions throughout the United States.** (Issued weekly, on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

JOS. A. ARNOLD,

*Editor and Chief Division of Publications.*

This circular will be sent regularly to all who apply for it.

# United States Department of Agriculture,

WASHINGTON, D. C., *December 31, 1915.*

## MONTHLY LIST OF PUBLICATIONS.

[DECEMBER, 1915.]

### HOW TO SECURE PUBLICATIONS.

A copy of any of the publications listed herein, including those with price named, except the Journal of Agricultural Research, Experiment Station Record, and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

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Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

### REPORTS.

- Annual Report of the Secretary of Agriculture, 1915. Pp. 55.  
Annual Report of the Chief of the Division of Accounts and Disbursements, 1915. Pp. 3.  
Annual Report of the Chief of the Bureau of Animal Industry, 1915. Pp. 66.  
Annual Report of the Chief of the Bureau of Biological Survey, 1915. Pp. 15.  
Annual Report of the Chemist, 1915. Pp. 10.  
Annual Report of the Chief of the Bureau of Crop Estimates, 1915. Pp. 7.  
Annual Report of the Editor, 1915. Pp. 21.  
Annual Report of the Entomologist, 1915. Pp. 21.  
Annual Report of the Director of the Office of Experiment Stations, 1915. Pp. 18.  
Annual Report of the Federal Horticultural Board, 1915. Pp. 11.  
Annual Report of the Forester, 1915. Pp. 30.  
Annual Report of the Insecticide and Fungicide Board, 1915. Pp. 4.  
Annual Report of the Librarian, 1915. Pp. 11.  
Annual Report of the Chief of the Office of Markets and Rural Organization, 1915. Pp. 38.  
Annual Report of the Chief of the Bureau of Plant Industry, 1915. Pp. 16.  
Annual Report of the Director of the Office of Public Roads, 1915. Pp. 14.  
Annual Report of the Chief of the Bureau of Soils, 1915. Pp. 10.  
Annual Report of the Solicitor, 1915. Pp. 29.  
Annual Report of the Chief of the Weather Bureau, 1915. Pp. 20.  
Report on the Work and Expenditures of the Agricultural Experiment Stations During the Fiscal Year Ended June 30, 1914. Pp. 289. (Office of Experiment Stations.) Price, 20 cents.

### SERIALS.

Journal of Agricultural Research. (Issued weekly.)

Vol. 5, No. 10. Dec. 6, 1915. Contents: Inheritance of Length of Pod in Certain Crosses. By John Belling.—A Honeycomb Heart-Rot of Oaks Caused by Stereum subpileatum. By William H. Long.—Measurement of the Winter Cycle in the Egg Production of Domestic Fowl. By Raymond Pearl.—Influence of Growth of Cowpeas upon Some Physical, Chemical, and Biological Properties of Soil. By C. A. LeClair. Pp. 405-448, pls. XL-XLII, figs. 2. Price, 15 cents.

## Journal of Agricultural Research—Continued.

*Same*, No. 11. Dec. 13, 1915. Contents: Translocation of Mineral Constituents of Seeds and Tubers of Certain Plants during Growth. By G. Davis Buckner.—Fate and Effect of Arsenic Applied as a Spray for Weeds. By W. T. McGeorge.—Angular Leaf-Spot of Cucumbers. By Erwin F. Smith and Mary Katherine Bryan.—Activity of Soil Protozoa. By George P. Koch.—Beriberi and Cottonseed Poisoning in Pigs. By George M. Rommel and E. B. Vedder. Pp. 449–493, pls. XLIII–XLIX. Price, 10 cents.

*Same*, No. 12. Dec. 20, 1915. Contents: Biology of *Apanteles militaris*. By Daniel G. Tower.—Respiration Experiments with Sweet Potatoes. By Heinrich Hasselbring and Lon A. Hawkins.—Cherry and Hawthorn Sawfly Leaf Miner. By P. J. Parrott and B. B. Fulton.—Variations in Mineral Composition of Sap, Leaves, and Stems of the Wild-Grape Vine and Sugar-Maple Tree. By O. M. Shedd. Pp. 495–542, pls. L–LI. Price, 10 cents.

*Same*, No. 13. Dec. 27, 1915. Contents: Carbohydrate Transformations in Sweet Potatoes. By Heinrich Hasselbring and Lon A. Hawkins.—Diuresis and Milk Flow. By H. Steenbock.—Petrography of Some North Carolina Soils and Its Relation to Their Fertilizer Requirements. By J. K. Plummer. Pp. 543–581, pl. 1. Price, 10 cents.

NOTE.—Beginning with Volume 5, THE JOURNAL OF AGRICULTURAL RESEARCH will be issued weekly and distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$3.00 per year, 52 numbers.

Experiment Station Record, Vol. XXXIII, No. 7, November, 1915. E. W. Allen, Ph. D., Editor. Pp. 601–700. Price, 15 cents.

*Same*, Vol. XXXIII, No. 8, December, 1915. Pp. 701–800. Price, 15 cents.

*Same*, Vol. XXXIII, No. 9, Abstract Number. Pp. 801–900. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 1, No. 8, Dec. 30, 1915. Pp. 77–92. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices and value of crops and live stock, and crop summary for 1915.

## SERVICE AND REGULATORY ANNOUNCEMENTS.

These contain *only* information, instructions, and notices governing the enforcement of the food and drug act, meat inspection, 28 hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 103. November, 1915. Pp. 121–128. Dec. 23, 1915. Price, 5 cents.

Federal Horticultural Board. No. 21. October, 1915. Pp. 81–86. Dec. 4, 1915. Price, 5 cents.

Federal Horticultural Board. No. 22. November, 1915. Pp. 87–90. Dec. 23, 1915. Price, 5 cents.

Insecticide and Fungicide Board. No. 12. Pp. 91–99. Dec. 31, 1915. Price, 5 cents.

## SOIL SURVEYS.

Soil Survey of Colquitt County, Georgia. By A. T. Sweet and J. B. R. Dickey. Pp. 39, pls. 2, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.

Soil Survey of Dekalb County, Georgia. By David D. Long, of the Georgia State College of Agriculture, and Mark Baldwin, of the U. S. Department of Agriculture. Pp. 25, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.

Soil Survey of Tattnall County, Georgia. By Arthur E. Taylor, Thomas D. Rice, Cornelius Van Duyne, and E. H. Stevens. Pp. 48, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.

Soil Survey of Clinton County, Indiana. By W. E. Tharp, of the U. S. Department of Agriculture, and R. H. Peacock and C. M. Rose, of the Indiana Department of Geology. Pp. 28, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.

Soil Survey of Clarke County, Mississippi. By A. L. Goodman, of the U. S. Department of Agriculture, and E. M. Jones, of the Mississippi Geological Survey. Pp. 41, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.

Soil Survey of Scotts Bluff County, Nebraska. By L. T. Skinner, of the Nebraska Soil Survey, and M. W. Beck, of the U. S. Department of Agriculture. Pp. 43, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.

- Soil Survey of Chesterfield County, South Carolina. By W. J. Latimer, M. W. Beck, J. M. Snyder, L. Cantrell, and N. M. Kirk. Pp. 45, pl. 1, fig. 1, map. (From F. O. Soils, 1914.) Price, 15 cents.
- Soil Survey of Dane County, Wisconsin. By W. J. Geib and Arthur E. Taylor, of the U. S. Department of Agriculture, and Guy Conrey, of the Wisconsin Geological and Natural History Survey. Pp. 78, fig. 1, map. (From F. O. Soils, 1913.) Price, 15 cents.
- Reconnaissance Soil Survey of Northeastern Wisconsin. By W. J. Geib, L. R. Schoenmann, and Arthur E. Taylor, of the U. S. Department of Agriculture, and A. L. Buser, Carl C. Thompson, and Clinton B. Post, of the Wisconsin Geological and Natural History Survey. Pp. 101, pls. 8, figs. 2, map. (From F. O. Soils, 1913.) Price, 25 cents.

## BULLETINS.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. As long as the department's supply lasts, these bulletins will be supplied free to persons who can use such specialized information. See instructions on page 1.

- The Ashes: Their Characteristics and Management. By W. D. Sterrett, Forest Examiner, Forest Service. Pp. 88, pls. 14. Contribution from the Forest Service. (Professional Paper.) Dec. 13, 1915. (Department Bulletin 299.) Price, 25 cents.  
Describes uses for, various species, and methods of reproduction of this valuable tree. Of especial interest to manufacturers of wooden articles.
- Tests of Corn Varieties on the Great Plains. By L. L. Zook, Physiologist, Office of Corn Investigations. Pp. 19, figs. 4. Contribution from the Bureau of Plant Industry. (Professional Paper.) Dec. 14, 1915. (Department Bulletin 307.) Price, 5 cents.  
Of particular interest to farmers, investigators, and teachers in the Great Plains area.
- Methods for the Examination of Bituminous Road Materials. By Prevost Hubbard, Chemical Engineer, and Charles S. Reeve, Chemist. Pp. 48, figs. 20. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) Dec. 10, 1915. (Department Bulletin 314.) Price, 10 cents.  
A revision of Office of Public Roads Bulletin 38. Technical in character and of interest to Engineers and Road Contractors.
- Willows: Their Growth, Use, and Importance. By George N. Lamb, Forest Examiner. Pp. 52, pls. 10. Contribution from the Forest Service. (Professional Paper.) Dec. 20, 1915. (Department Bulletin 316.) Price, 15 cents.  
Contains general information as to the various uses for willows and their propagation.
- Importance and Character of the Milled Rice Imported into the United States. By F. B. Wise, Assistant in Grain Standardization. Pp. 8, pl. 1, fig. 1. Contribution from the Bureau of Plant Industry. Dec. 4, 1915. (Department Bulletin 323.) Price, 5 cents.  
Of interest to growers, shippers, and importers of rice.
- Community Production of Durango Cotton in the Imperial Valley. By Argyle McLachlan, Scientific Assistant, Office of Western Irrigation Agriculture. Pp. 16. Contribution from the Bureau of Plant Industry. Dec. 22, 1915. (Department Bulletin 324.) Price, 5 cents.  
Of especial interest to those growing cotton under irrigation.
- Milling and Baking Tests of Wheat Containing Admixtures of Rye, Corn Cockle, Kinghead, and Vetch. By R. C. Miller, Assistant in Charge of Dockage Investigations, Office of Grain Standardization. Pp. 24, pls. 2, figs. 10. Contribution from the Bureau of Plant Industry. (Professional Paper.) Dec. 30, 1915. (Department Bulletin 328.) Price, 10 cents.  
The data presented in this bulletin are applicable to the wheat-producing sections of the United States and are of interest to farmers, grain dealers, flour millers, and bakers.
- Directions for Blueberry Culture, 1916. By Frederick V. Coville, Botanist. Pp. 16, pls. 17. Contribution from the Bureau of Plant Industry. (Professional Paper.) Dec. 28, 1915. (Department Bulletin 334.) Price, 15 cents.  
Describes soil requirements, methods of planting, and yields and profits.
- Experiments in Vaccination Against Anthrax. By Adolph Eichhorn, Chief of the Pathological Division. Pp. 16. Contribution from the Bureau of Animal Industry. (Professional Paper.) Dec. 27, 1915. (Department Bulletin 340.) Price, 5 cents.  
Of interest to stock raisers and veterinarians generally.

## MISCELLANEOUS.

- The Acarina or Mites. A Review of the Group for the Use of Economic Entomologists. By Nathan Banks, Entomological Assistant. Pp. 153, figs. 294. Contribution from the Bureau of Entomology. Dec. 15, 1915. (Report No. 108, Office of the Secretary.) Price, 30 cents.  
Not for miscellaneous distribution.
- Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction, During the Period from July 1 to September 30, 1913. Pp. 74, pls. 6. Dec. 23, 1915. (Bureau of Plant Industry Inventory No. 36, Nos. 35667 to 36258.) Price, 15 cents.  
Not for miscellaneous distribution.

## FARMERS' BULLETINS.

No price is quoted for Farmers' Bulletins for the reason that the department's supply of the current numbers is ordinarily sufficient to make it possible to send them free to all applicants.

**Duck Raising.** By Alfred R. Lee, Animal Husbandman in Poultry Investigations, Animal Husbandry Division. Pp. 23, figs. 13. Contribution from the Bureau of Animal Industry. Dec. 31, 1915. (Farmers' Bulletin 697.)

For general distribution.

**Trenching Machinery Used for the Construction of Trenches for Tile Drains.** By D. L. Yarnell, Drainage Engineer, Division of Drainage Investigations. Pp. 27, figs. 15. Contribution from the Office of Public Roads and Rural Engineering. Dec. 28, 1915. (Farmers' Bulletin 698.)

Describes the types of trenching machines, and discusses the limiting conditions of work and the cost of trenching. It will be of service to those whose lands need tile drainage. It does not deal with drainage of irrigated lands, where the requirements for good trenching machines are often unusual and the cost of work much greater.

## PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**National Weather and Crop Bulletin, No. 31, November, 1915, reporting temperature, rainfall, and crop conditions throughout the United States.** (Issued weekly, on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

**Snow and Ice Bulletins for December 7, 14, 21, 28.** These bulletins are issued weekly during the winter seasons, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,

*Editor and Chief Division of Publications.*